



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HBL3420-50D.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 1
 [TESTLAB] EVERFINE
 [TESTDATE] 2017-06-22
 [ISSUEDATE] 2017-06-23 17:20:12
 [NEARFIELD]
 [LAMPPOSITION] 0,0
 [OTHER] EVERFINE GO-2000B_V1 SYSTEM
 [MANUFAC] LAMAR LIGHTING CO., INC.
 [LUMCAT] HBL3420-50D
 [LAMPCAT] 3030
 [LAMP] CW

CHARACTERISTICS

Lumens Per Lamp	28384 (1 lamp)
Total Lamp Lumens	28384
Luminaire Lumens	28384
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	202.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.16 m
Luminous Width (90-270)	0.09 m
Luminous Height	0.00 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	85862	79939	88958
55	78221	71149	83454
65	69378	61629	76448
75	56527	52042	75313
85	32723	56589	114493

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01
1	10000.00	9995.80	10030.21	10094.79	10103.83	10111.11	10069.74	10020.08	10000.91	10021.88
2	9993.04	9976.76	10004.24	10071.75	10089.75	10093.12	10048.68	10002.11	9995.84	10027.92
3	9981.09	9953.70	9972.29	10044.69	10069.73	10070.15	10022.63	9979.14	9984.80	10029.96
4	9966.11	9924.67	9938.29	10012.65	10048.68	10044.16	9993.56	9952.15	9970.73	10026.99
5	9946.21	9894.59	9899.43	9977.57	10023.62	10014.26	9959.46	9922.24	9951.66	10020.04
6	9922.25	9857.56	9855.48	9936.56	9994.53	9978.30	9918.44	9886.29	9927.60	10009.07
7	9894.28	9818.49	9809.48	9895.48	9959.49	9938.33	9877.35	9846.31	9899.54	9992.12
8	9860.34	9774.54	9759.51	9848.55	9922.53	9896.33	9830.42	9802.33	9867.57	9973.13
9	9822.37	9723.52	9703.55	9796.53	9881.48	9849.35	9780.36	9754.34	9831.50	9948.18
10	9781.39	9672.45	9646.54	9744.46	9837.40	9799.35	9726.30	9701.36	9789.43	9919.20
11	9735.42	9615.38	9586.55	9687.39	9787.38	9747.35	9669.22	9647.35	9743.38	9887.21
12	9684.46	9553.35	9518.61	9624.34	9737.29	9689.37	9607.16	9584.39	9694.30	9849.24
13	9630.46	9490.27	9447.61	9559.28	9681.20	9628.37	9542.09	9519.38	9640.23	9807.26
14	9572.48	9421.21	9373.61	9490.21	9619.16	9563.37	9472.96	9452.37	9582.17	9762.26
15	9509.50	9349.13	9294.62	9417.16	9556.03	9492.39	9395.94	9378.39	9521.06	9711.28
16	9442.70	9272.07	9214.81	9341.09	9485.01	9421.55	9319.85	9304.55	9453.03	9659.41
17	9370.73	9191.97	9129.84	9262.01	9414.95	9345.57	9238.74	9224.58	9384.90	9601.44
18	9295.73	9104.91	9041.84	9177.96	9341.82	9266.56	9151.72	9140.58	9308.85	9539.46
19	9215.76	9016.10	8948.86	9092.12	9261.03	9183.56	9065.85	9052.58	9230.99	9474.45
20	9133.75	8925.02	8854.83	9002.06	9182.91	9098.54	8973.77	8962.56	9149.90	9404.47
21	9046.77	8828.96	8753.87	8908.99	9096.83	9007.55	8877.74	8866.57	9062.84	9329.48
22	8955.77	8729.87	8652.82	8811.93	9006.81	8914.53	8782.63	8769.54	8973.76	9253.46
23	8858.80	8625.78	8544.85	8712.84	8918.67	8817.52	8681.51	8666.54	8881.64	9171.47
24	8759.77	8516.74	8435.82	8608.79	8821.62	8719.49	8573.48	8561.51	8781.59	9087.45
25	8658.75	8407.65	8325.78	8503.71	8723.57	8616.48	8467.39	8451.50	8681.51	8998.45
26	8551.77	8294.56	8210.78	8394.61	8624.46	8511.45	8357.29	8340.46	8578.41	8906.43
27	8442.05	8176.50	8096.04	8280.54	8520.32	8402.73	8243.22	8225.75	8470.32	8810.68
28	8329.04	8057.42	7975.07	8163.48	8408.28	8289.72	8127.14	8109.71	8359.24	8711.67
29	8210.06	7935.32	7850.06	8046.42	8297.20	8172.71	8009.03	7987.72	8245.17	8609.65
30	8092.98	7809.58	7723.03	7927.64	8183.51	8054.66	7886.30	7863.68	8129.41	8503.64
31	7969.01	7679.53	7593.01	7802.58	8074.33	7934.63	7762.20	7737.64	8011.29	8394.62
32	7841.99	7550.41	7459.98	7676.49	7952.30	7814.58	7633.09	7610.60	7886.21	8283.59
33	7713.95	7413.36	7324.95	7545.44	7832.19	7688.57	7499.06	7478.58	7759.15	8168.58
34	7583.91	7277.31	7190.88	7415.35	7707.09	7558.55	7367.98	7345.53	7632.06	8051.54
35	7448.91	7142.19	7052.86	7282.26	7578.11	7428.49	7234.85	7208.50	7501.93	7930.52
36	7311.87	7000.13	6912.82	7145.22	7455.87	7295.46	7095.81	7070.45	7364.88	7806.49
37	7171.84	6858.06	6769.79	7010.10	7317.93	7158.43	6958.74	6926.43	7228.78	7677.47
38	7032.16	6714.98	6625.14	6869.04	7189.71	7022.73	6820.57	6784.74	7089.66	7548.76
39	6887.16	6570.51	6478.10	6728.01	7047.78	6884.69	6673.57	6639.71	6945.71	7416.74
40	6740.12	6425.98	6329.06	6589.86	6916.58	6742.67	6531.35	6493.66	6810.45	7281.71
41	6594.04	6276.09	6182.96	6443.03	6773.99	6600.61	6389.15	6344.62	6659.86	7144.67
42	6443.04	6127.39	6031.96	6303.81	6639.84	6457.55	6249.14	6197.54	6515.12	7007.61
43	6291.97	5975.01	5878.91	6152.45	6496.47	6309.53	6097.38	6045.52	6370.38	6866.58
44	6143.87	5821.96	5729.80	6004.82	6353.05	6161.47	5951.30	5894.44	6226.26	6725.52
45	5988.88	5665.17	5575.79	5852.57	6204.88	6015.39	5794.56	5743.37	6071.84	6583.46
46	5833.81	5511.03	5420.73	5701.27	6053.98	5861.38	5644.79	5584.37	5918.97	6433.46
47	5682.70	5353.56	5268.63	5548.99	5908.03	5711.29	5495.06	5429.27	5769.01	6288.36
48	5522.73	5195.67	5108.65	5393.60	5753.86	5560.23	5338.82	5275.19	5612.12	6140.32
49	5366.62	5039.40	4954.52	5241.01	5603.78	5407.17	5185.47	5119.14	5458.24	5992.25
50	5211.96	4883.67	4799.88	5087.03	5453.85	5252.54	5032.09	4962.50	5304.85	5841.62
51	5054.92	4727.93	4644.82	4935.15	5299.59	5098.47	4875.50	4807.42	5147.89	5689.57
52	4896.86	4571.67	4487.77	4788.84	5150.60	4946.38	4719.80	4650.37	4988.75	5536.51
53	4741.76	4416.65	4333.67	4641.32	5010.89	4800.26	4566.85	4495.28	4834.84	5383.44

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54	4583.72	4257.35	4178.61	4492.60	4861.87	4652.22	4411.75	4336.25	4678.96	5230.37
55	4425.65	4100.25	4025.52	4352.27	4721.72	4503.16	4255.23	4179.16	4519.92	5075.32
56	4269.56	3947.98	3878.39	4184.09	4566.57	4365.00	4106.10	4024.08	4365.89	4920.25
57	4114.48	3794.49	3727.36	4006.43	4376.11	4194.20	3954.90	3869.01	4209.16	4765.19
58	3961.39	3637.38	3580.26	3853.67	4214.99	4018.17	3801.95	3715.93	4050.86	4612.10
59	3802.39	3483.74	3436.16	3706.01	4066.55	3864.92	3655.37	3558.89	3895.80	4456.06
60	3648.27	3334.06	3282.20	3563.25	3920.08	3713.84	3511.71	3403.80	3742.08	4299.99
61	3494.62	3181.92	3117.68	3427.33	3777.49	3572.09	3360.44	3252.13	3584.54	4145.33
62	3343.52	3030.31	2971.38	3285.79	3643.71	3435.98	3193.06	3102.05	3430.25	3993.24
63	3186.52	2878.53	2837.48	3119.60	3486.59	3292.98	3040.47	2950.00	3278.15	3838.20
64	3036.37	2731.46	2703.74	2982.72	3323.33	3129.11	2895.83	2812.23	3122.04	3685.12
65	2892.23	2586.15	2569.17	2849.70	3186.95	2989.82	2757.37	2664.19	2971.83	3532.05
66	2748.16	2441.04	2429.46	2720.73	3053.69	2863.22	2620.47	2515.08	2821.08	3378.98
67	2597.82	2294.77	2287.10	2572.96	2920.50	2736.74	2479.34	2370.60	2669.46	3228.89
68	2449.34	2151.56	2157.49	2442.79	2765.63	2590.83	2333.32	2226.69	2516.28	3076.84
69	2299.69	2012.97	2030.27	2319.74	2638.84	2457.56	2202.25	2080.52	2368.00	2933.78
70	2154.01	1874.43	1899.00	2198.54	2509.56	2332.80	2073.69	1941.12	2217.40	2790.80
71	2009.66	1740.65	1778.75	2080.13	2387.17	2212.41	1939.24	1804.68	2069.38	2643.67
72	1863.25	1598.91	1659.47	1961.27	2266.71	2093.03	1814.82	1663.16	1922.02	2497.24
73	1719.74	1467.97	1545.13	1850.80	2147.29	1975.69	1695.16	1525.08	1776.18	2351.05
74	1581.95	1342.33	1435.57	1741.45	2032.85	1861.07	1579.10	1394.88	1631.80	2206.80
75	1443.16	1219.71	1328.64	1635.82	1922.78	1749.58	1468.17	1267.77	1492.48	2063.54
76	1304.89	1097.33	1223.46	1531.44	1812.02	1643.61	1357.20	1145.21	1350.12	1924.05
77	1172.43	980.31	1123.98	1429.48	1706.04	1538.98	1251.12	1025.91	1210.63	1783.74
78	1042.06	872.14	1028.76	1334.54	1604.82	1437.70	1150.45	910.30	1077.17	1647.72
79	915.91	767.79	938.20	1242.11	1505.89	1340.64	1053.47	803.54	946.67	1518.19
80	794.42	670.41	851.55	1152.93	1411.06	1248.03	960.51	703.00	820.72	1386.14
81	676.09	581.74	768.39	1066.69	1318.11	1158.47	871.58	609.07	698.94	1257.40
82	563.06	493.18	690.09	984.68	1229.90	1071.20	787.62	520.15	585.74	1135.15
83	459.93	416.58	617.84	906.57	1144.22	988.81	707.72	439.25	472.71	1018.55
84	363.15	346.96	549.42	831.51	1062.65	909.12	634.31	366.35	373.82	905.75
85	281.33	285.49	486.51	760.89	984.32	835.27	565.80	306.00	283.48	800.20
86	199.69	231.63	427.00	693.39	908.40	763.41	497.39	245.78	202.47	700.73
87	136.90	185.65	373.43	630.69	837.67	695.22	438.34	196.23	137.25	607.56
88	88.64	146.70	323.68	571.94	769.44	631.15	383.57	154.39	86.81	522.30
89	57.67	114.54	281.74	513.23	704.25	570.67	332.80	120.11	53.33	445.49
90	29.23	88.57	239.88	460.23	642.77	513.77	286.89	91.87	22.25	374.79
91	27.96	68.43	203.57	411.31	585.55	460.35	244.86	69.25	21.05	312.22
92	27.13	53.05	171.82	366.18	528.40	410.40	207.97	51.85	20.29	257.73
93	26.46	41.63	143.82	324.09	477.10	364.25	174.90	38.99	19.67	210.48
94	25.88	32.14	119.50	285.07	428.89	322.22	145.69	28.87	19.17	170.40
95	25.40	25.48	97.87	249.51	382.92	284.66	119.81	20.11	18.76	136.32
96	25.05	24.18	79.55	217.24	341.56	247.14	97.81	17.97	18.44	108.26
97	24.69	23.79	63.83	187.61	302.70	214.01	78.60	17.53	18.16	85.38
98	24.45	23.58	48.37	160.89	266.77	184.12	62.03	17.34	17.94	67.05
99	24.24	23.40	32.54	136.27	233.49	157.19	46.33	17.20	17.77	52.16
100	24.22	23.24	24.37	114.53	202.32	132.81	29.60	17.09	17.62	40.04
101	23.84	23.10	23.42	94.87	174.48	110.89	18.92	17.00	17.48	29.40
102	24.00	22.98	22.98	76.86	149.66	91.07	17.61	16.91	17.38	21.76
103	24.03	22.84	22.78	57.24	126.26	72.83	17.23	16.83	17.30	19.71
104	24.18	22.71	22.67	37.42	105.04	53.10	17.06	16.77	17.21	19.02
105	24.16	22.62	22.55	24.87	85.76	32.83	16.96	16.70	17.16	18.61
106	23.82	22.52	22.46	23.00	66.30	19.69	16.88	16.64	17.08	18.26
107	24.20	22.44	22.38	22.67	44.30	17.56	16.83	16.62	17.06	17.94
108	22.99	22.36	22.32	22.48	25.81	17.35	16.82	16.60	17.06	17.69
109	24.67	22.30	22.26	22.36	17.88	17.28	16.82	16.62	17.05	17.53

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110	23.25	22.24	22.22	22.28	17.47	17.23	16.83	16.62	17.04	17.43
111	22.81	22.20	22.17	22.19	17.43	17.21	16.83	16.65	17.03	17.35
112	22.95	22.16	22.14	22.13	17.38	17.21	16.84	16.65	17.02	17.29
113	22.64	22.12	22.10	22.09	17.36	17.20	16.87	16.70	17.02	17.26
114	22.40	22.13	22.06	22.05	17.37	17.23	16.90	16.73	17.03	17.21
115	24.02	22.08	22.05	22.01	17.36	17.25	16.95	16.77	17.05	17.19
116	22.29	22.06	22.03	21.99	17.39	17.27	16.99	16.81	17.06	17.18
117	22.24	22.06	22.01	21.96	17.40	17.30	17.05	16.88	17.08	17.16
118	23.43	22.05	22.01	21.96	17.42	17.34	17.11	16.94	17.13	17.17
119	22.18	22.03	22.02	21.94	17.44	17.39	17.16	16.99	17.14	17.18
120	22.13	22.02	22.02	21.95	17.47	17.44	17.23	17.08	17.17	17.20
121	22.13	22.03	22.04	21.96	17.51	17.50	17.30	17.15	17.23	17.23
122	22.12	22.04	22.04	21.96	17.57	17.58	17.40	17.25	17.27	17.27
123	22.10	22.07	22.07	21.98	17.61	17.64	17.49	17.31	17.32	17.32
124	22.10	22.06	22.10	21.99	17.67	17.73	17.58	17.39	17.36	17.38
125	22.11	22.09	22.13	22.00	17.75	17.81	17.68	17.47	17.44	17.43
126	22.13	22.11	22.17	22.02	17.82	17.87	17.78	17.58	17.51	17.50
127	22.16	22.16	22.20	22.05	17.91	17.97	17.90	17.69	17.59	17.58
128	22.18	22.18	22.26	22.09	18.00	18.07	18.01	17.81	17.70	17.67
129	22.25	22.24	22.31	22.11	18.09	18.17	18.15	17.93	17.82	17.76
130	22.30	22.30	22.37	22.17	18.20	18.28	18.26	18.05	17.92	17.85
131	22.39	22.38	22.46	22.25	18.29	18.39	18.39	18.19	18.04	17.96
132	22.48	22.46	22.55	22.31	18.41	18.51	18.52	18.30	18.16	18.06
133	22.57	22.56	22.63	22.36	18.51	18.64	18.66	18.43	18.29	18.18
134	22.64	22.65	22.71	22.43	18.64	18.77	18.81	18.58	18.42	18.29
135	22.72	22.71	22.75	22.48	18.77	18.90	18.93	18.72	18.56	18.42
136	22.75	22.77	22.79	22.54	18.90	19.05	19.08	18.87	18.72	18.56
137	22.81	22.82	22.85	22.59	19.04	19.19	19.23	19.03	18.88	18.71
138	22.87	22.90	22.90	22.66	19.19	19.33	19.38	19.19	19.04	18.86
139	22.94	22.97	22.97	22.70	19.34	19.50	19.54	19.37	19.23	19.04
140	23.02	23.05	23.04	22.75	19.51	19.66	19.72	19.56	19.41	19.21
141	23.11	23.12	23.11	22.82	19.69	19.81	19.88	19.72	19.60	19.40
142	23.19	23.21	23.17	22.90	19.85	19.96	20.05	19.92	19.78	19.58
143	23.28	23.30	23.26	22.99	20.01	20.11	20.18	20.07	19.98	19.76
144	23.37	23.40	23.36	23.09	20.18	20.25	20.33	20.25	20.18	19.95
145	23.47	23.52	23.47	23.17	20.32	20.40	20.49	20.41	20.38	20.15
146	23.56	23.62	23.58	23.25	20.51	20.54	20.65	20.56	20.61	20.36
147	23.66	23.72	23.69	23.35	20.67	20.70	20.82	20.75	20.81	20.55
148	23.78	23.82	23.80	23.47	20.86	20.86	20.96	20.92	21.04	20.77
149	23.89	23.92	23.90	23.60	21.03	21.00	21.13	21.08	21.23	20.98
150	24.01	24.04	24.00	23.73	21.19	21.17	21.29	21.27	21.44	21.21
151	24.14	24.13	24.09	23.86	21.38	21.32	21.45	21.44	21.64	21.41
152	24.27	24.24	24.18	23.97	21.55	21.47	21.60	21.61	21.83	21.62
153	24.41	24.34	24.26	24.08	21.74	21.65	21.78	21.80	22.02	21.83
154	24.52	24.44	24.35	24.18	21.92	21.81	21.94	21.97	22.21	22.04
155	24.66	24.54	24.44	24.28	22.09	21.96	22.11	22.14	22.38	22.24
156	24.80	24.63	24.51	24.37	22.28	22.13	22.28	22.30	22.54	22.43
157	24.91	24.73	24.59	24.45	22.47	22.29	22.46	22.47	22.72	22.64
158	25.04	24.81	24.64	24.53	22.65	22.45	22.63	22.64	22.86	22.82
159	25.13	24.88	24.69	24.60	22.82	22.60	22.78	22.80	23.03	23.01
160	25.23	24.95	24.73	24.65	23.03	22.78	22.96	22.99	23.19	23.18
161	25.30	24.99	24.77	24.73	23.21	22.98	23.13	23.17	23.34	23.38
162	25.37	25.05	24.79	24.77	23.42	23.14	23.29	23.35	23.53	23.56
163	25.44	25.11	24.82	24.79	23.63	23.31	23.45	23.54	23.69	23.73
164	25.49	25.13	24.84	24.78	23.85	23.48	23.63	23.71	23.85	23.89
165	25.53	25.18	24.86	24.78	24.07	23.62	23.77	23.87	24.00	24.03

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CANDELA TABULATION - (Cont.)

166	25.58	25.21	24.88	24.76	24.29	23.78	23.94	24.04	24.15	24.16
167	25.62	25.26	24.89	24.78	24.52	23.95	24.11	24.22	24.29	24.28
168	25.68	25.28	24.92	24.77	24.73	24.14	24.27	24.39	24.42	24.41
169	25.72	25.32	24.93	24.77	24.95	24.35	24.45	24.54	24.53	24.52
170	25.76	25.33	24.94	24.78	25.21	24.55	24.60	24.70	24.63	24.63
171	25.79	25.35	24.94	24.78	25.43	24.78	24.76	24.84	24.74	24.73
172	25.69	25.30	24.88	24.71	25.58	24.96	24.93	24.96	24.87	24.83
173	25.23	25.04	24.70	24.58	25.62	25.09	25.07	25.10	24.98	24.92
174	25.23	25.00	24.67	24.54	25.62	25.15	25.18	25.21	25.08	25.00
175	25.18	24.97	24.63	24.53	25.53	25.02	25.22	25.20	25.11	24.96
176	25.15	24.95	24.57	24.51	25.38	24.93	25.16	25.24	25.12	24.96
177	25.11	24.91	24.53	24.49	25.32	24.80	25.13	25.26	25.18	24.93
178	25.17	24.86	24.47	24.40	25.28	24.72	25.10	25.32	25.26	24.92
179	25.45	25.05	24.50	24.43	25.33	24.71	25.10	25.39	25.33	24.95
180	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34

Vert. Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01	10064.01
1	10071.13	10128.87	10121.92	10138.05	10099.86	10043.02	10000.00
2	10084.09	10140.90	10124.96	10145.03	10109.88	10047.98	9993.04
3	10093.05	10148.94	10124.00	10149.00	10113.95	10047.95	9981.09
4	10099.01	10152.97	10120.03	10148.96	10114.98	10044.90	9966.11
5	10100.95	10151.02	10113.08	10144.92	10113.01	10036.86	9946.21
6	10097.91	10146.04	10101.13	10136.88	10107.06	10024.82	9922.25
7	10091.86	10138.07	10087.15	10124.84	10096.12	10008.76	9894.28
8	10081.83	10126.10	10068.20	10109.84	10081.16	9987.78	9860.34
9	10066.78	10110.13	10044.25	10089.81	10062.20	9962.74	9822.37
10	10047.73	10091.15	10017.27	10066.75	10038.25	9933.69	9781.39
11	10024.68	10068.17	9986.31	10037.71	10012.26	9900.64	9735.42
12	9997.63	10039.21	9951.33	10005.67	9981.30	9862.58	9684.46
13	9967.55	10007.22	9912.36	9970.61	9946.33	9820.54	9630.46
14	9931.52	9972.23	9870.37	9930.56	9908.34	9775.48	9572.48
15	9894.40	9931.25	9823.41	9886.51	9865.37	9725.41	9509.50
16	9848.38	9889.36	9774.54	9839.46	9818.52	9670.36	9442.70
17	9802.33	9843.38	9720.58	9789.38	9766.56	9612.27	9370.73
18	9754.19	9790.42	9664.58	9733.34	9711.58	9548.22	9295.73
19	9696.32	9737.40	9601.63	9675.44	9652.60	9481.34	9215.76
20	9638.24	9678.42	9537.62	9613.38	9590.60	9410.28	9133.75
21	9575.17	9614.44	9467.66	9546.32	9522.64	9335.21	9046.77
22	9508.12	9549.42	9397.63	9475.27	9452.64	9256.15	8955.77
23	9439.01	9478.44	9320.67	9402.19	9376.67	9174.08	8858.80
24	9362.96	9405.42	9240.67	9323.14	9297.67	9087.01	8759.77
25	9284.90	9327.43	9160.63	9242.08	9216.65	8996.95	8658.75
26	9204.83	9246.42	9073.67	9159.00	9131.66	8903.86	8551.77
27	9121.71	9163.62	8986.86	9070.92	9041.91	8805.78	8442.05
28	9031.64	9075.63	8891.93	8978.86	8947.92	8703.70	8329.04
29	8939.57	8982.64	8795.90	8883.80	8849.93	8598.62	8210.06
30	8844.75	8889.60	8696.89	8786.98	8750.90	8489.84	8092.98
31	8746.66	8791.60	8595.87	8684.93	8647.90	8376.78	7969.01
32	8643.60	8690.58	8490.87	8581.84	8539.91	8262.69	7841.99
33	8539.49	8587.56	8384.83	8472.80	8429.89	8142.63	7713.95
34	8429.42	8480.54	8275.82	8364.71	8318.85	8021.56	7583.91
35	8317.39	8372.50	8161.82	8251.65	8201.86	7898.45	7448.91
36	8207.22	8259.49	8046.78	8137.57	8084.81	7769.38	7311.87

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CANDELA TABULATION - (Cont.)

37	8086.25	8144.46	7924.80	8020.48	7961.82	7638.32	7171.84
38	7972.02	8027.74	7804.07	7899.38	7838.11	7507.21	7032.16
39	7843.11	7908.71	7679.07	7773.32	7711.10	7371.14	6887.16
40	7725.81	7783.71	7551.05	7646.25	7580.09	7233.07	6740.12
41	7589.28	7655.69	7423.98	7517.53	7450.02	7094.39	6594.04
42	7468.06	7529.61	7290.00	7387.45	7314.03	6956.29	6443.04
43	7331.08	7395.62	7156.93	7254.38	7176.98	6813.23	6291.97
44	7200.91	7263.55	7021.90	7119.28	7041.90	6670.16	6143.87
45	7060.88	7131.49	6884.86	6979.23	6899.92	6525.89	5988.88
46	6923.83	6989.51	6740.87	6841.16	6756.86	6381.58	5833.81
47	6787.69	6851.42	6603.74	6701.08	6616.77	6232.34	5682.70
48	6644.68	6710.38	6459.75	6559.60	6467.80	6080.96	5522.73
49	6505.65	6568.32	6312.71	6418.07	6321.71	5930.10	5366.62
50	6366.50	6423.68	6167.04	6271.99	6174.06	5777.93	5211.96
51	6217.94	6277.63	6018.01	6125.79	6024.03	5624.26	5054.92
52	6070.37	6129.58	5868.95	5977.64	5873.96	5470.49	4896.86
53	5924.22	5982.50	5715.93	5827.93	5723.89	5318.18	4741.76
54	5773.90	5832.47	5564.84	5673.51	5569.87	5161.37	4583.72
55	5622.75	5678.43	5410.80	5520.50	5415.80	5005.12	4425.65
56	5473.71	5526.35	5258.71	5369.20	5262.73	4852.52	4269.56
57	5321.53	5373.29	5108.63	5215.95	5108.67	4697.96	4114.48
58	5166.92	5220.22	4965.49	5061.31	4956.58	4541.25	3961.39
59	5016.05	5065.17	4813.51	4907.35	4800.55	4384.69	3802.39
60	4862.67	4910.10	4679.27	4758.15	4646.46	4231.98	3648.27
61	4707.21	4758.43	4524.83	4611.10	4494.79	4078.40	3494.62
62	4555.81	4612.31	4342.11	4463.92	4339.76	3922.79	3343.52
63	4403.81	4465.25	4173.85	4325.47	4184.70	3768.28	3186.52
64	4247.16	4326.11	4028.51	4168.60	4033.58	3616.65	3036.37
65	4096.72	4171.19	3883.45	3990.46	3881.53	3464.51	2892.23
66	3943.05	3990.34	3741.35	3833.93	3729.46	3314.07	2748.16
67	3790.27	3830.09	3603.24	3686.82	3579.37	3160.74	2597.82
68	3639.15	3686.89	3447.37	3545.43	3434.25	3009.50	2449.34
69	3492.99	3540.85	3289.33	3406.01	3293.15	2863.42	2299.69
70	3349.43	3400.74	3154.02	3269.92	3152.08	2716.16	2154.01
71	3207.01	3266.63	3028.86	3110.09	2997.16	2569.96	2009.66
72	3061.13	3106.20	2892.24	2965.47	2855.67	2422.54	1863.25
73	2896.34	2961.97	2755.49	2836.58	2714.32	2281.35	1719.74
74	2753.95	2839.30	2627.75	2711.60	2579.77	2140.61	1581.95
75	2619.20	2716.84	2504.20	2568.59	2451.21	2001.64	1443.16
76	2483.66	2574.42	2380.49	2435.60	2310.06	1861.77	1304.89
77	2349.44	2440.53	2262.88	2310.09	2172.94	1724.55	1172.43
78	2207.65	2314.89	2145.46	2192.02	2050.25	1595.29	1042.06
79	2079.87	2195.46	2032.22	2074.41	1925.90	1465.06	915.91
80	1957.68	2077.49	1920.96	1960.47	1800.57	1335.32	794.42
81	1827.25	1962.97	1813.05	1847.75	1682.63	1211.76	676.09
82	1707.70	1848.69	1706.89	1739.14	1568.10	1094.26	563.06
83	1591.96	1739.02	1606.40	1633.24	1458.85	980.25	459.93
84	1480.66	1632.74	1508.59	1529.86	1352.88	871.46	363.15
85	1372.91	1530.79	1413.48	1430.92	1250.07	768.76	281.33
86	1267.03	1430.50	1321.42	1334.95	1150.51	673.80	199.69
87	1167.98	1333.99	1233.36	1243.59	1057.11	587.75	136.90
88	1072.52	1241.70	1148.67	1154.31	965.49	501.79	88.64
89	980.86	1153.22	1066.70	1069.57	880.98	427.21	57.67
90	893.11	1067.14	989.16	987.13	798.16	359.72	29.23
91	809.72	985.38	912.53	909.14	719.97	300.51	27.96
92	732.18	906.79	842.25	836.01	648.27	248.97	27.13

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CANDELA TABULATION - (Cont.)

93	659.09	832.85	774.29	765.40	580.72	204.07	26.46
94	591.13	762.93	710.44	698.37	517.95	165.32	25.88
95	523.27	695.27	648.51	635.90	458.50	133.45	25.40
96	464.54	632.06	590.19	577.79	404.81	107.19	25.05
97	410.09	571.80	535.66	519.74	355.06	85.85	24.69
98	359.60	515.55	483.97	467.61	312.25	68.92	24.45
99	313.40	462.99	435.74	417.74	269.52	54.82	24.24
100	271.62	413.58	389.92	372.75	232.22	43.73	24.22
101	233.58	367.97	348.20	331.10	199.44	33.55	23.84
102	200.39	325.83	311.01	292.21	169.89	27.41	24.00
103	169.77	288.59	273.86	256.35	144.10	25.93	24.03
104	142.80	251.39	240.22	223.53	120.74	25.32	24.18
105	119.23	218.39	209.64	194.27	99.60	24.86	24.16
106	97.87	188.84	181.72	167.18	81.34	24.45	23.82
107	78.56	161.68	155.81	141.91	64.57	24.04	24.20
108	61.36	136.66	131.29	118.40	46.60	23.68	22.99
109	43.58	113.21	108.81	97.51	32.24	23.43	24.67
110	28.06	91.90	87.70	77.32	26.36	23.25	23.25
111	20.73	71.81	64.24	55.51	24.99	23.11	22.81
112	18.73	49.91	43.01	36.49	24.36	22.97	22.95
113	18.22	30.97	28.73	26.73	23.85	22.86	22.64
114	17.83	20.98	23.96	23.94	23.49	22.74	22.40
115	17.58	17.96	23.16	23.45	23.29	22.66	24.02
116	17.43	17.56	23.04	23.18	23.14	22.57	22.29
117	17.34	17.42	22.95	23.04	23.02	22.50	22.24
118	17.28	17.34	22.86	22.93	22.91	22.43	23.43
119	17.26	17.28	22.80	22.84	22.81	22.38	22.18
120	17.23	17.27	22.75	22.78	22.74	22.32	22.13
121	17.21	17.26	22.70	22.73	22.67	22.29	22.13
122	17.20	17.26	22.66	22.69	22.62	22.26	22.12
123	17.21	17.27	22.62	22.64	22.57	22.25	22.10
124	17.23	17.30	22.60	22.62	22.54	22.23	22.10
125	17.26	17.33	22.57	22.60	22.52	22.23	22.11
126	17.29	17.38	22.57	22.59	22.49	22.22	22.13
127	17.35	17.44	22.58	22.57	22.48	22.22	22.16
128	17.40	17.49	22.58	22.59	22.47	22.24	22.18
129	17.46	17.57	22.60	22.59	22.50	22.26	22.25
130	17.52	17.64	22.63	22.62	22.50	22.31	22.30
131	17.60	17.72	22.66	22.68	22.55	22.35	22.39
132	17.66	17.81	22.72	22.73	22.59	22.43	22.48
133	17.77	17.89	22.74	22.77	22.65	22.49	22.57
134	17.86	18.00	22.75	22.81	22.69	22.56	22.64
135	17.96	18.12	22.75	22.82	22.70	22.61	22.72
136	18.07	18.23	22.77	22.84	22.72	22.65	22.75
137	18.18	18.34	22.78	22.81	22.73	22.69	22.81
138	18.32	18.49	22.82	22.80	22.75	22.75	22.87
139	18.45	18.63	22.87	22.81	22.76	22.79	22.94
140	18.59	18.77	22.93	22.80	22.80	22.85	23.02
141	18.76	18.93	22.99	22.83	22.83	22.92	23.11
142	18.90	19.08	23.08	22.89	22.86	22.98	23.19
143	19.06	19.23	23.17	22.94	22.91	23.04	23.28
144	19.23	19.38	23.25	23.00	22.95	23.12	23.37
145	19.38	19.54	23.33	23.06	23.01	23.20	23.47
146	19.55	19.70	23.43	23.14	23.09	23.27	23.56
147	19.73	19.86	23.54	23.22	23.15	23.36	23.66
148	19.89	20.02	23.63	23.30	23.24	23.46	23.78

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CANDELA TABULATION - (Cont.)

149	20.09	20.19	23.75	23.39	23.33	23.56	23.89
150	20.24	20.37	23.86	23.49	23.43	23.69	24.01
151	20.44	20.52	23.99	23.59	23.53	23.79	24.14
152	20.63	20.69	24.11	23.71	23.61	23.89	24.27
153	20.82	20.87	24.30	23.82	23.71	24.02	24.41
154	21.01	21.05	24.45	23.93	23.81	24.12	24.52
155	21.19	21.22	24.60	24.05	23.92	24.21	24.66
156	21.38	21.40	24.72	24.16	24.01	24.33	24.80
157	21.58	21.59	24.83	24.27	24.10	24.44	24.91
158	21.77	21.79	24.92	24.40	24.20	24.54	25.04
159	21.98	21.97	25.00	24.45	24.28	24.62	25.13
160	22.19	22.18	25.08	24.55	24.36	24.70	25.23
161	22.43	22.38	25.15	24.62	24.43	24.80	25.30
162	22.66	22.60	25.21	24.68	24.49	24.86	25.37
163	22.89	22.79	25.27	24.73	24.56	24.93	25.44
164	23.11	23.01	25.33	24.80	24.61	25.01	25.49
165	23.31	23.23	25.41	24.85	24.69	25.08	25.53
166	23.54	23.45	25.46	24.91	24.75	25.17	25.58
167	23.73	23.68	25.52	24.98	24.80	25.25	25.62
168	23.92	23.92	25.57	25.00	24.87	25.31	25.68
169	24.05	24.14	25.61	25.04	24.92	25.38	25.72
170	24.18	24.32	25.66	25.05	24.96	25.43	25.76
171	24.28	24.45	25.67	25.06	25.01	25.49	25.79
172	24.35	24.54	25.62	25.03	24.98	25.47	25.69
173	24.42	24.57	25.51	24.86	24.74	24.99	25.23
174	24.46	24.57	25.51	24.80	24.73	24.97	25.23
175	24.38	24.37	25.50	24.77	24.68	24.96	25.18
176	24.30	24.28	25.50	24.74	24.67	24.96	25.15
177	24.27	24.21	25.52	24.71	24.64	24.95	25.11
178	24.28	24.20	25.45	24.62	24.64	24.94	25.17
179	24.33	24.23	25.42	24.74	24.93	25.46	25.45
180	25.34	25.34	25.34	25.34	25.34	25.34	25.34

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	3661.43	12.90	12.90
0-30	7721.83	27.20	27.20
0-40	12528.31	44.10	44.10
0-60	21685.66	76.40	76.40
0-80	26957.43	95.00	95.00
0-90	27892.06	98.30	98.30
10-90	26940.8	94.90	94.90
20-40	8866.87	31.20	31.20
20-50	13733.28	48.40	48.40
40-70	12409.14	43.70	43.70
60-80	5271.78	18.60	18.60
70-80	2019.98	7.10	7.10
80-90	934.62	3.30	3.30
90-110	402.53	1.40	1.40
90-120	424.42	1.50	1.50
90-130	442.30	1.60	1.60
90-150	471.90	1.70	1.70
90-180	491.86	1.70	1.70
110-180	89.33	0.30	0.30
0-180	28383.91	100.00	100.00

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	951.26
10-20	2710.18
20-30	4060.39
30-40	4806.48
40-50	4866.41
50-60	4290.94
60-70	3251.79
70-80	2019.98
80-90	934.62
90-100	319.52
100-110	83.01
110-120	21.90
120-130	17.88
130-140	15.96
140-150	13.63
150-160	10.68
160-170	6.90
170-180	2.38

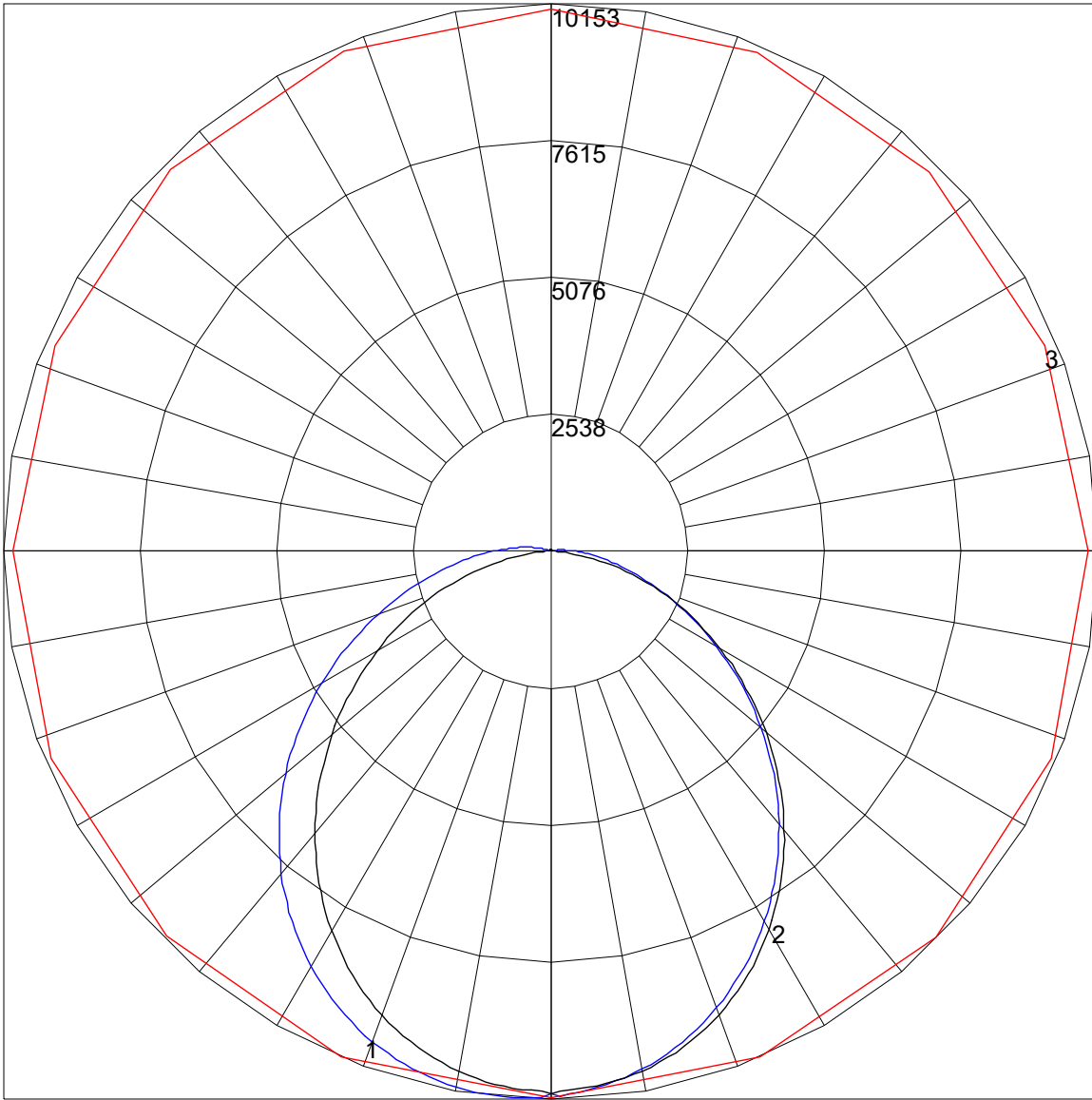
IES INDOOR REPORT
PHOTOMETRIC FILENAME : HBL3420-50D.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	103	98	94	105	100	96	93	96	92	89	92	89	86	88	85	83	81
2	98	90	83	77	95	87	81	76	84	78	74	80	76	72	77	73	70	67
3	89	79	70	64	87	77	69	63	74	67	62	71	65	60	68	63	59	57
4	82	70	61	54	79	68	60	54	66	58	53	63	57	52	61	55	51	49
5	75	62	53	47	73	61	53	46	59	51	46	57	50	45	55	49	44	42
6	70	56	47	41	68	55	47	40	53	46	40	51	45	39	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	45	39	35	33
8	60	47	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	35	29	55	42	34	29	41	34	29	40	33	28	38	32	28	26
10	53	39	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 10152.97 Located At Horizontal Angle = 247.5, Vertical Angle = 4
1 - Vertical Plane Through Horizontal Angles (247.5 - 67.5) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (0 - 180)
3 - Horizontal Cone Through Vertical Angle (4) (Through Max. Cd.)