



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZCAS310HTVLOWT50120-277V.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]

[TESTLAB]

[TESTDATE] 07 February 2018

[ISSUEDATE] 2018-02-07 11:51:49

[NEARFIELD]

[LAMPPOSITION] 0,0

[OTHER]

[MANUFAC] BEGHELLI

[LUMINAIRE] HZCAS310HTVLOWT50120-277V

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8254
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	63
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.70
Spacing Criterion (90-270)	0.70
Spacing Criterion (Diagonal)	0.74
Basic Luminous Shape	Point
Luminous Length (0-180)	0.00 m
Luminous Width (90-270)	0.00 m
Luminous Height	0.00 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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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	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94
1	10519.48	10515.18	10517.48	10510.55	10514.60	10515.65	10514.04	10511.99	10513.26	10516.17
2	10475.29	10467.20	10468.67	10459.78	10465.03	10470.59	10473.87	10459.99	10459.83	10462.75
3	10400.70	10393.05	10389.53	10376.38	10377.01	10380.83	10391.47	10383.79	10377.10	10383.43
4	10292.29	10285.94	10281.47	10268.33	10276.41	10281.37	10281.79	10270.21	10265.97	10270.94
5	10158.60	10151.15	10147.47	10127.63	10128.25	10136.18	10150.45	10129.66	10125.18	10134.69
6	9998.28	9985.24	9982.66	9960.64	9962.67	9968.37	9975.25	9962.68	9960.29	9965.98
7	9809.37	9790.77	9788.60	9775.67	9788.18	9794.63	9789.10	9770.26	9766.87	9775.84
8	9605.07	9582.08	9582.66	9547.86	9551.50	9557.79	9571.82	9554.43	9554.21	9561.11
9	9368.83	9348.43	9345.93	9328.54	9338.29	9339.88	9325.41	9315.69	9316.16	9326.25
10	9117.40	9089.51	9087.97	9068.46	9067.51	9070.76	9078.72	9056.78	9056.86	9070.77
11	8834.20	8812.94	8808.33	8781.52	8780.48	8778.17	8781.11	8777.76	8774.60	8786.25
12	8535.67	8514.03	8512.73	8504.80	8511.72	8510.53	8491.27	8478.57	8471.36	8484.19
13	8216.99	8204.24	8199.14	8172.42	8164.58	8164.27	8173.51	8162.73	8162.00	8169.06
14	7892.09	7879.30	7874.27	7853.07	7865.03	7851.53	7843.30	7833.55	7830.77	7846.22
15	7559.07	7545.46	7543.64	7528.95	7534.84	7524.05	7517.99	7500.82	7501.14	7513.67
16	7221.49	7203.11	7207.75	7173.74	7179.11	7166.98	7169.65	7169.12	7164.59	7176.90
17	6889.11	6867.36	6872.36	6854.89	6879.81	6866.92	6843.39	6827.82	6826.96	6840.87
18	6555.97	6534.25	6541.51	6505.52	6517.90	6506.14	6511.49	6500.47	6494.50	6510.22
19	6230.41	6207.21	6217.12	6186.02	6203.40	6190.34	6181.14	6174.08	6173.77	6188.02
20	5912.43	5892.02	5901.31	5879.07	5892.93	5890.64	5877.45	5861.43	5855.98	5870.01
21	5603.07	5580.33	5593.89	5556.94	5561.75	5554.94	5559.71	5550.21	5550.42	5557.97
22	5303.18	5285.68	5290.33	5276.97	5292.54	5284.94	5260.17	5252.87	5254.97	5257.71
23	5012.41	4991.55	5000.77	4977.00	4976.09	4977.96	4971.44	4962.88	4959.83	4965.07
24	4731.58	4715.92	4720.35	4699.32	4695.73	4689.72	4679.32	4678.23	4679.45	4684.19
25	4457.06	4443.13	4446.79	4432.70	4437.48	4435.51	4419.85	4407.29	4409.25	4412.34
26	4189.29	4179.80	4181.88	4158.28	4150.81	4143.85	4147.61	4145.96	4148.64	4152.43
27	3936.86	3931.14	3931.85	3920.14	3915.03	3908.67	3896.96	3891.09	3898.60	3900.92
28	3694.26	3688.76	3688.04	3668.22	3667.06	3664.23	3657.06	3653.02	3659.40	3664.29
29	3459.67	3455.66	3451.23	3436.14	3435.43	3433.83	3427.87	3424.70	3431.61	3435.56
30	3235.20	3232.06	3230.52	3222.86	3203.79	3203.43	3198.67	3196.38	3203.82	3206.82
31	3025.94	3024.22	3017.87	3005.48	2972.65	2973.45	2969.83	2968.46	2976.43	2978.48
32	2826.13	2826.51	2820.11	2814.80	2788.32	2784.25	2774.67	2771.59	2779.23	2780.31
33	2638.78	2637.19	2632.08	2622.19	2601.50	2598.57	2591.09	2585.43	2591.03	2593.16
34	2461.81	2459.94	2453.46	2444.95	2414.79	2412.39	2410.41	2411.51	2416.74	2416.99
35	2291.54	2290.47	2285.24	2281.83	2261.93	2259.43	2248.28	2244.35	2248.91	2250.36
36	2136.35	2132.03	2127.67	2116.64	2093.90	2094.73	2089.86	2090.06	2091.72	2092.31
37	1986.36	1983.52	1978.12	1974.09	1949.08	1946.77	1940.69	1941.39	1942.37	1944.20
38	1844.84	1840.85	1836.77	1832.62	1816.26	1815.70	1806.19	1804.90	1805.02	1808.14
39	1719.22	1708.04	1711.35	1706.34	1676.22	1674.42	1673.51	1676.03	1676.65	1677.73
40	1594.17	1590.87	1586.45	1580.57	1564.62	1561.87	1553.52	1554.54	1554.16	1556.54
41	1469.11	1473.98	1461.56	1454.79	1445.46	1444.77	1440.59	1441.94	1442.05	1444.53
42	1360.35	1357.08	1352.16	1350.98	1338.26	1335.83	1330.95	1335.69	1334.59	1337.48
43	1261.17	1257.78	1254.45	1249.99	1247.30	1245.54	1237.29	1237.33	1237.83	1239.61
44	1168.25	1164.87	1161.87	1158.48	1149.07	1146.47	1144.97	1147.12	1147.39	1148.27
45	1082.94	1080.79	1077.50	1075.71	1071.64	1067.06	1063.58	1062.95	1063.49	1065.98
46	1005.88	1003.14	1000.88	996.33	993.95	990.18	987.44	986.92	987.52	988.02
47	933.28	931.04	927.96	925.65	919.04	915.78	915.37	916.03	915.70	916.61
48	866.86	865.15	862.20	859.49	859.04	855.40	852.32	850.76	850.43	851.29
49	804.31	803.45	800.40	797.72	793.03	790.26	789.90	790.35	788.88	789.59
50	748.38	746.99	745.40	743.12	739.22	735.98	733.66	733.87	733.23	734.30
51	695.89	694.75	693.57	690.04	688.89	686.07	683.56	683.19	682.05	681.78
52	647.34	646.74	645.20	642.67	638.12	634.91	634.66	635.58	635.07	635.38
53	603.63	602.96	602.21	599.57	599.13	596.37	592.93	592.92	592.77	592.06

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54	563.88	563.64	562.26	558.85	557.10	555.27	554.33	554.29	552.79	553.09
55	527.55	527.53	526.44	524.20	522.10	519.74	518.31	518.27	517.94	517.57
56	494.54	494.58	492.97	490.70	491.44	489.38	486.81	485.88	485.05	484.55
57	464.30	464.16	463.31	461.65	458.95	457.23	455.67	455.38	454.92	454.88
58	436.02	435.80	435.00	433.10	433.52	431.41	428.62	428.65	427.35	426.77
59	409.96	409.53	409.30	407.20	406.22	406.09	402.86	402.99	401.22	400.55
60	385.85	385.77	385.01	384.46	382.09	380.90	378.68	378.91	377.24	376.81
61	362.98	363.14	362.19	360.99	360.88	359.80	356.71	356.62	354.73	354.43
62	341.29	341.24	340.40	339.51	338.00	336.63	334.83	335.23	333.30	333.24
63	320.89	321.02	320.34	319.19	318.66	317.24	314.57	314.43	312.72	312.41
64	301.02	301.45	300.83	299.24	299.17	298.14	295.59	295.40	293.22	293.26
65	282.44	282.69	281.96	281.24	279.16	278.09	276.59	276.29	274.28	274.46
66	264.74	264.90	264.04	262.74	262.33	261.36	258.84	258.16	256.13	256.39
67	247.25	247.45	246.47	245.79	244.06	243.43	241.46	241.22	239.15	239.22
68	230.38	230.59	229.41	228.96	227.68	226.62	224.73	224.40	222.52	222.39
69	213.72	214.08	212.80	212.26	211.46	210.59	208.59	208.46	206.33	206.17
70	197.93	197.99	197.09	196.59	194.72	193.90	192.32	192.57	190.46	190.49
71	182.00	182.16	181.22	180.12	180.35	179.02	176.94	177.00	175.06	174.96
72	166.74	166.68	166.07	165.09	164.37	163.69	161.68	161.48	159.98	159.68
73	151.73	151.65	151.03	150.06	149.04	147.81	146.33	146.42	145.17	144.69
74	136.80	136.80	136.07	135.16	135.33	134.69	132.10	131.60	130.70	130.37
75	122.29	122.20	121.90	120.97	119.36	118.98	117.26	117.05	116.23	115.96
76	108.26	108.20	107.86	106.84	105.88	105.28	103.29	103.00	102.15	102.25
77	94.88	94.31	94.38	93.25	92.18	91.59	89.44	89.17	88.62	88.72
78	81.77	81.18	80.99	80.32	77.97	77.41	76.33	76.08	75.51	75.89
79	69.38	69.04	68.89	67.90	66.51	65.91	64.29	63.62	63.36	63.75
80	57.24	57.33	57.06	56.42	54.11	53.60	52.97	52.32	52.25	52.57
81	46.19	46.10	45.77	44.89	43.76	43.05	42.45	41.95	41.53	41.94
82	35.85	35.71	35.49	34.69	34.25	33.71	32.63	32.27	31.92	32.00
83	27.03	26.97	26.66	26.04	24.75	24.24	23.88	23.67	23.49	23.53
84	19.43	19.40	19.07	18.45	17.78	17.37	16.88	16.61	16.37	16.43
85	13.19	13.11	12.83	12.35	11.53	11.33	11.19	11.05	11.07	10.92
86	7.84	7.69	7.49	7.14	7.03	6.71	6.78	6.57	6.47	6.54
87	4.49	4.38	4.39	4.17	3.83	3.94	3.83	3.62	3.52	3.74
88	2.24	2.35	2.41	2.19	1.71	1.66	1.72	1.49	1.50	1.50
89	0.90	1.13	1.13	0.91	1.60	1.53	0.45	0.34	0.34	0.34
90	0.41	0.58	0.52	0.46	1.48	1.41	0.45	0.34	0.34	0.34
91	0.34	0.51	0.51	0.45	1.37	1.28	0.45	0.35	0.35	0.34
92	0.34	0.34	0.51	0.45	1.25	1.15	0.45	0.36	0.35	0.34
93	0.39	0.39	0.52	0.44	1.13	1.03	0.45	0.36	0.36	0.34
94	0.39	0.39	0.52	0.44	1.02	0.90	0.45	0.37	0.36	0.34
95	0.40	0.40	0.53	0.43	0.90	0.77	0.45	0.38	0.36	0.34
96	0.40	0.40	0.54	0.43	0.79	0.64	0.45	0.40	0.37	0.34
97	0.40	0.41	0.55	0.43	0.67	0.52	0.45	0.43	0.37	0.40
98	0.41	0.41	0.56	0.42	0.56	0.39	0.45	0.45	0.38	0.41
99	0.41	0.41	0.57	0.42	0.44	0.39	0.45	0.48	0.38	0.43
100	0.41	0.42	0.58	0.41	0.39	0.45	0.45	0.51	0.39	0.45
101	0.42	0.42	0.59	0.41	0.42	0.45	0.50	0.53	0.39	0.47
102	0.42	0.42	0.60	0.41	0.46	0.48	0.56	0.56	0.42	0.49
103	0.43	0.43	0.61	0.40	0.49	0.51	0.59	0.50	0.46	0.50
104	0.43	0.43	0.62	0.40	0.52	0.55	0.62	0.56	0.49	0.56
105	0.43	0.44	0.63	0.39	0.56	0.58	0.66	0.56	0.52	0.57
106	0.44	0.44	0.64	0.45	0.56	0.62	0.69	0.59	0.55	0.58
107	0.44	0.44	0.64	0.39	0.61	0.67	0.73	0.61	0.58	0.59
108	0.44	0.45	0.65	0.50	0.72	0.71	0.84	0.64	0.62	0.61
109	0.45	0.50	0.66	0.56	0.72	0.75	0.84	0.67	0.67	0.62

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110	0.67	0.72	0.67	0.56	0.78	0.79	0.86	0.70	0.73	0.65
111	0.67	0.73	0.79	0.67	0.83	0.84	0.88	0.73	0.67	0.67
112	0.73	0.78	0.73	0.78	0.83	0.89	0.90	0.84	0.73	0.70
113	0.78	0.81	0.84	0.90	0.89	0.95	0.93	0.78	0.79	0.73
114	0.78	0.83	0.84	0.84	0.95	1.06	0.95	0.78	0.95	0.76
115	0.84	0.85	0.90	0.84	1.00	1.00	1.06	0.89	0.90	0.79
116	0.89	0.88	0.96	1.01	1.06	1.00	1.11	0.84	0.95	0.81
117	0.84	0.91	1.01	1.07	1.11	1.11	1.17	0.84	1.01	0.84
118	0.84	0.95	1.12	1.12	1.17	1.12	1.23	1.06	1.01	0.90
119	0.89	0.98	1.24	1.24	1.22	1.34	1.28	1.07	1.06	1.01
120	0.95	1.01	1.40	1.40	1.39	1.34	1.39	1.40	1.12	1.29
121	1.12	1.29	1.46	1.57	1.45	1.51	1.39	1.51	1.24	1.35
122	1.61	1.67	1.63	1.68	1.55	1.61	1.46	1.62	1.52	1.57
123	1.90	1.79	1.63	1.74	1.55	1.62	1.67	1.62	1.68	1.63
124	1.90	1.90	1.74	1.91	1.62	1.84	1.73	1.90	1.71	1.74
125	2.18	2.07	1.74	2.02	1.89	1.89	1.73	2.07	1.74	1.85
126	2.29	2.45	1.85	2.19	2.00	2.01	1.89	2.29	1.77	2.07
127	2.57	2.63	2.02	2.63	2.11	2.23	1.95	2.35	1.80	2.14
128	2.63	2.74	2.30	2.64	2.22	2.34	2.12	2.62	1.83	2.41
129	2.90	2.85	2.52	2.80	2.56	2.40	2.23	2.74	0.14	2.53
130	3.19	2.91	2.59	3.03	2.78	2.67	2.40	2.91	2.85	2.75
131	3.46	3.35	2.86	3.14	2.83	2.79	2.68	3.13	2.97	2.92
132	3.63	3.53	3.20	3.37	3.17	3.01	2.90	3.36	3.08	3.15
133	3.80	3.75	3.37	3.59	3.34	3.18	3.07	3.58	3.31	3.42
134	4.24	4.36	3.59	3.87	3.62	3.40	3.18	3.85	3.69	3.53
135	4.47	4.43	3.77	4.21	3.89	3.73	3.46	4.08	3.98	3.82
136	4.75	4.81	4.15	4.43	4.17	3.90	3.68	4.30	4.20	4.04
137	5.14	5.26	4.38	4.72	4.50	4.18	3.95	4.58	4.48	4.21
138	5.26	5.43	4.44	5.15	4.89	4.35	3.96	4.75	4.70	4.54
139	5.64	5.88	4.50	5.28	5.17	4.79	4.29	4.97	5.15	4.66
140	5.98	6.16	4.55	5.72	5.39	5.07	4.46	5.25	5.43	5.27
141	6.15	6.60	4.61	6.12	5.89	5.34	4.73	5.53	5.59	5.66
142	6.32	7.06	4.61	6.29	6.23	5.62	5.01	5.81	5.93	6.00
143	6.32	7.45	5.11	6.63	6.56	5.96	5.07	6.26	6.04	6.39
144	6.38	7.89	5.28	7.12	6.94	6.36	5.36	6.65	6.16	6.74
145	7.16	8.40	5.90	7.47	7.44	6.79	5.74	7.10	6.33	7.29
146	8.42	8.84	6.40	7.86	7.89	7.13	6.18	7.65	7.11	7.73
147	9.22	9.30	7.07	8.42	8.22	7.74	6.53	8.06	7.94	8.19
148	9.94	9.85	7.68	8.76	8.72	8.02	6.86	8.66	8.67	8.63
149	10.51	10.19	8.20	9.21	9.17	8.47	7.36	8.94	9.07	8.97
150	11.13	10.81	8.77	9.61	9.83	9.02	7.86	9.44	9.52	9.48
151	11.79	11.48	9.54	10.00	10.22	9.43	8.36	9.73	9.96	9.93
152	12.36	11.82	10.17	10.61	10.66	10.18	8.85	10.27	10.07	10.31
153	12.91	12.32	10.94	11.01	10.99	10.63	9.47	10.68	10.41	10.93
154	13.31	12.66	11.63	11.62	11.27	11.19	10.03	11.23	10.46	11.15
155	13.70	13.26	12.35	11.97	11.71	11.86	10.42	11.73	10.52	11.15
156	14.15	13.78	12.75	12.52	11.82	12.42	10.76	12.13	10.92	11.21
157	14.32	14.17	13.32	12.70	12.32	12.97	11.36	12.68	11.25	11.44
158	14.81	14.45	13.87	12.97	12.66	13.41	11.58	13.01	11.86	11.99
159	15.04	15.06	14.44	12.92	13.00	13.64	12.09	13.57	12.48	12.72
160	15.21	15.29	14.88	13.15	13.60	14.14	12.53	13.96	13.15	13.34
161	15.44	15.52	15.17	13.43	14.21	14.42	12.76	14.36	13.60	13.74
162	15.82	15.63	15.39	13.43	14.60	14.53	13.15	14.69	13.99	14.19
163	16.00	16.13	15.79	13.82	14.88	14.86	13.48	14.96	14.38	14.74
164	16.11	18.71	15.74	13.82	15.22	15.14	13.53	15.24	14.60	14.97
165	16.33	17.22	16.01	14.22	15.82	15.81	13.81	15.58	14.54	15.24

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CANDELA TABULATION - (Cont.)

166	16.28	17.20	16.13	14.44	15.86	16.25	14.03	15.97	14.60	15.30
167	16.28	17.69	16.74	14.88	13.53	16.81	14.38	16.41	15.05	15.86
168	17.00	18.71	17.36	15.17	17.32	17.43	14.77	17.61	16.38	16.67
169	18.03	19.47	17.97	15.67	17.60	17.75	15.22	18.42	18.01	17.77
170	19.17	20.11	18.32	16.01	18.60	18.59	16.06	18.88	19.41	18.98
171	20.53	20.51	18.72	16.24	19.43	19.38	16.83	19.32	20.38	20.20
172	21.30	20.78	18.83	16.74	19.87	19.92	17.33	19.38	20.48	21.36
173	21.81	20.90	18.89	16.97	19.93	19.87	17.72	19.43	20.57	21.91
174	22.09	20.95	19.11	17.08	19.98	20.15	18.10	19.49	20.67	22.19
175	22.43	21.29	19.67	17.47	20.26	20.42	18.26	19.54	20.77	22.41
176	22.59	21.46	19.84	17.87	20.15	20.20	18.26	19.60	20.87	22.47
177	22.82	21.46	20.01	17.98	19.98	20.20	18.27	19.65	20.97	22.41
178	22.77	21.35	20.01	17.98	19.87	20.03	18.32	19.71	20.64	22.47
179	22.82	21.24	20.01	17.98	19.81	20.04	18.33	19.71	20.59	22.58
180	22.86	22.86	22.86	22.86	22.86	22.86	22.86	22.86	22.86	22.86

Vert. Angles **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	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94	10531.94
1	10517.35	10510.39	10514.81	10521.25	10515.37	10517.77	10519.48
2	10469.27	10476.75	10472.76	10480.43	10472.97	10477.72	10475.29
3	10398.99	10393.64	10389.64	10394.31	10397.05	10402.03	10400.70
4	10292.74	10293.75	10277.92	10296.74	10294.73	10294.34	10292.29
5	10156.77	10169.06	10151.18	10170.47	10159.69	10163.74	10158.60
6	9992.40	9990.36	9971.02	9988.87	9990.70	10000.34	9998.28
7	9804.06	9823.32	9798.03	9820.25	9806.61	9810.67	9809.37
8	9592.27	9596.48	9576.71	9601.35	9589.38	9601.60	9605.07
9	9354.87	9360.39	9337.42	9355.44	9361.95	9363.96	9368.83
10	9096.15	9120.93	9105.17	9114.71	9096.98	9101.72	9117.40
11	8810.25	8814.47	8796.06	8810.97	8819.77	8823.08	8834.20
12	8513.29	8540.10	8511.18	8531.24	8531.57	8529.41	8535.67
13	8198.55	8214.36	8205.06	8218.19	8203.78	8219.08	8216.99
14	7868.21	7879.33	7852.09	7873.68	7889.88	7891.90	7892.09
15	7539.42	7569.66	7556.80	7570.24	7552.81	7563.70	7559.07
16	7206.41	7206.10	7194.15	7213.78	7211.94	7228.34	7221.49
17	6867.03	6891.64	6866.42	6887.07	6889.44	6889.14	6889.11
18	6538.94	6556.97	6544.53	6563.40	6540.32	6558.16	6555.97
19	6211.76	6220.82	6192.72	6214.65	6227.62	6229.95	6230.41
20	5895.40	5921.33	5904.17	5919.96	5899.81	5914.49	5912.43
21	5581.81	5586.19	5582.32	5597.73	5599.06	5604.83	5603.07
22	5284.03	5297.90	5279.98	5297.61	5305.93	5301.16	5303.18
23	4991.65	5004.29	5007.95	5018.00	5005.33	5013.33	5012.41
24	4708.16	4708.47	4703.89	4720.60	4735.56	4729.09	4731.58
25	4439.65	4454.99	4453.58	4469.85	4457.93	4458.14	4457.06
26	4176.54	4177.36	4189.82	4198.12	4196.66	4197.01	4189.29
27	3923.45	3931.81	3929.89	3942.82	3948.38	3946.31	3936.86
28	3683.76	3698.67	3706.55	3709.53	3699.24	3704.76	3694.26
29	3453.97	3466.52	3454.06	3459.71	3469.16	3468.34	3459.67
30	3224.18	3234.36	3244.28	3248.23	3245.77	3246.12	3235.20
31	2994.83	3002.64	3036.74	3035.95	3035.67	3035.50	3025.94
32	2798.91	2803.51	2823.22	2832.47	2840.37	2834.36	2826.13
33	2605.87	2623.35	2648.94	2654.53	2645.62	2650.53	2638.78
34	2431.31	2434.92	2458.03	2465.32	2474.61	2470.27	2461.81
35	2259.81	2274.63	2292.34	2301.99	2300.44	2303.17	2291.54
36	2104.40	2113.05	2139.01	2146.20	2141.13	2144.74	2136.35

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CANDELA TABULATION - (Cont.)

37	1952.84	1960.36	1977.86	1988.71	1993.72	1993.24	1986.36
38	1817.06	1829.05	1847.01	1855.70	1849.41	1851.37	1844.84
39	1685.12	1690.32	1721.39	1728.92	1724.08	1725.32	1719.22
40	1563.11	1573.85	1595.94	1602.33	1599.36	1599.83	1594.17
41	1450.69	1460.77	1470.48	1475.75	1474.65	1474.34	1469.11
42	1343.53	1347.52	1355.26	1361.45	1368.44	1365.17	1360.35
43	1245.48	1255.98	1261.44	1268.05	1265.62	1266.30	1261.17
44	1155.22	1157.54	1164.67	1170.55	1175.31	1171.98	1168.25
45	1071.09	1076.39	1078.34	1084.81	1087.60	1086.50	1082.94
46	993.70	999.68	1003.48	1008.75	1009.78	1008.51	1005.88
47	921.91	923.47	925.26	930.65	936.33	935.57	933.28
48	856.21	860.80	862.29	867.13	866.94	868.36	866.86
49	794.57	796.72	798.58	802.77	805.27	805.57	804.31
50	737.67	740.11	740.76	745.09	747.43	749.28	748.38
51	686.61	688.91	691.61	694.40	694.17	695.83	695.89
52	638.05	638.16	640.50	643.26	647.16	647.84	647.34
53	594.81	597.09	599.29	601.80	601.76	603.91	603.63
54	555.42	556.51	558.76	560.66	562.83	563.49	563.88
55	519.71	519.84	521.32	523.41	525.63	527.74	527.55
56	486.99	488.97	490.23	491.92	492.20	493.77	494.54
57	456.93	456.32	458.53	460.30	462.19	463.86	464.30
58	428.81	429.36	431.07	432.94	433.38	435.81	436.02
59	403.08	403.52	405.39	406.54	408.13	409.91	409.96
60	378.65	378.41	380.34	382.11	383.52	385.83	385.85
61	355.99	356.79	358.53	359.77	360.58	362.72	362.98
62	334.46	334.26	336.36	337.44	338.99	341.14	341.29
63	313.78	313.71	316.16	317.13	318.19	320.51	320.89
64	294.73	295.26	297.04	297.52	299.50	301.00	301.02
65	275.50	275.23	277.96	278.52	280.36	282.37	282.44
66	257.48	258.41	261.05	261.63	262.73	264.41	264.74
67	240.53	240.36	243.48	243.69	245.50	247.01	247.25
68	223.65	223.99	226.42	226.64	228.32	229.80	230.38
69	207.66	207.98	210.76	210.70	212.33	213.13	213.72
70	191.71	191.57	194.20	194.22	196.00	196.94	197.93
71	176.30	176.81	179.28	179.51	180.53	181.37	182.00
72	161.18	161.69	163.72	163.92	165.64	166.00	166.74
73	145.74	146.34	148.83	148.99	150.39	151.06	151.73
74	131.45	132.60	134.63	134.57	136.51	136.14	136.80
75	116.88	117.69	119.72	119.77	121.74	122.02	122.29
76	102.91	103.95	106.17	106.54	107.85	108.07	108.26
77	89.37	90.68	92.25	92.45	94.33	94.51	94.88
78	76.30	76.90	79.03	79.41	80.80	81.40	81.77
79	64.23	65.44	67.28	67.54	69.02	69.34	69.38
80	52.90	53.49	54.97	55.53	57.03	57.40	57.24
81	42.24	43.04	43.81	44.59	45.84	46.13	46.19
82	32.60	33.37	34.04	34.66	35.88	35.91	35.85
83	23.88	24.21	25.32	26.00	26.81	26.93	27.03
84	17.04	17.39	18.37	18.88	19.50	19.46	19.43
85	11.40	11.63	12.27	12.59	13.41	13.28	13.19
86	6.95	7.18	7.27	7.63	7.92	7.83	7.84
87	3.98	4.09	4.17	4.34	4.69	4.52	4.49
88	1.68	1.68	2.11	2.22	2.45	2.40	2.24
89	0.45	1.43	0.78	0.85	1.12	1.01	0.90
90	0.46	1.19	0.45	0.57	0.57	0.52	0.41
91	0.46	0.94	0.39	0.56	0.56	0.45	0.34
92	0.47	0.69	0.39	0.45	0.50	0.41	0.34

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CANDELA TABULATION - (Cont.)

93	0.47	0.45	0.40	0.45	0.56	0.38	0.39
94	0.48	0.39	0.41	0.65	0.45	0.35	0.39
95	0.48	0.45	0.42	0.85	0.50	0.35	0.40
96	0.49	0.45	0.43	1.06	0.48	0.35	0.40
97	0.49	0.50	0.44	1.26	0.46	0.35	0.40
98	0.50	0.45	0.45	1.46	0.43	0.36	0.41
99	0.50	0.49	0.46	1.67	0.44	0.36	0.41
100	0.51	0.52	0.47	1.87	0.45	0.36	0.41
101	0.51	0.56	0.48	2.07	0.46	0.37	0.42
102	0.56	0.60	0.49	2.28	0.46	0.37	0.42
103	0.51	0.64	0.50	2.48	0.47	0.37	0.43
104	0.54	0.67	0.51	2.25	0.48	0.37	0.43
105	0.58	0.70	0.52	2.03	0.49	0.38	0.43
106	0.62	0.73	0.52	1.80	0.49	0.38	0.44
107	0.66	0.77	0.53	1.57	0.50	0.38	0.44
108	0.69	0.82	0.54	1.35	0.67	0.39	0.44
109	0.73	0.86	0.55	1.12	0.61	0.39	0.45
110	0.79	0.91	0.77	0.89	0.61	0.39	0.67
111	0.83	0.95	0.83	0.92	0.72	0.45	0.67
112	0.88	1.00	0.83	0.94	0.72	0.61	0.73
113	0.92	1.04	0.89	0.96	0.83	0.61	0.78
114	0.97	1.08	0.89	0.99	0.78	0.72	0.78
115	1.01	1.12	0.94	1.01	0.78	0.67	0.84
116	1.07	1.12	0.94	1.03	0.84	0.73	0.89
117	1.18	1.24	1.11	1.06	1.05	0.67	0.84
118	1.18	1.24	1.11	1.17	1.11	0.84	0.84
119	1.29	1.35	1.22	1.22	1.17	0.89	0.89
120	1.29	1.40	1.39	1.33	1.33	1.06	0.95
121	1.35	1.41	1.61	1.45	1.34	1.28	1.12
122	1.46	1.46	1.77	1.61	1.55	1.61	1.61
123	1.52	1.58	1.83	1.78	1.61	1.78	1.90
124	1.52	1.74	1.94	1.83	1.73	1.79	1.90
125	1.69	1.80	2.00	2.06	1.67	1.95	2.18
126	1.75	1.81	2.16	2.17	1.67	2.12	2.29
127	1.92	2.08	2.49	2.61	1.78	2.50	2.57
128	2.08	2.25	2.66	2.67	1.95	2.57	2.63
129	2.25	2.47	2.77	2.83	2.11	2.73	2.90
130	2.42	2.53	2.99	2.84	2.28	2.96	3.19
131	2.59	2.70	3.37	3.05	2.66	3.28	3.46
132	2.76	2.98	3.49	3.50	2.62	3.57	3.63
133	3.04	3.10	3.83	3.56	2.95	3.74	3.80
134	3.20	3.37	4.32	3.89	3.22	4.18	4.24
135	3.37	3.55	4.44	4.06	3.51	4.47	4.47
136	3.43	3.99	4.76	4.33	3.56	4.74	4.75
137	3.60	4.05	5.16	4.67	3.89	4.96	5.14
138	3.82	4.39	5.43	5.06	4.23	5.35	5.26
139	4.05	4.78	5.71	5.34	4.34	5.63	5.64
140	4.33	5.17	6.16	5.51	4.67	6.19	5.98
141	4.62	5.51	6.54	5.94	4.95	6.41	6.15
142	5.01	5.79	6.93	6.12	5.29	6.92	6.32
143	5.51	6.13	7.38	6.23	5.68	7.42	6.32
144	5.98	6.58	7.76	6.29	6.17	7.86	6.38
145	6.70	6.86	8.27	6.51	6.74	8.48	7.16
146	7.36	7.19	8.60	7.05	7.17	8.81	8.42
147	7.81	7.75	9.04	7.18	7.90	9.10	9.22
148	8.61	7.99	9.48	7.45	8.72	9.32	9.94

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CANDELA TABULATION - (Cont.)

149	9.45	8.54	9.82	7.95	9.13	9.82	10.51
150	10.13	8.77	10.43	8.01	9.80	10.21	11.13
151	10.64	9.28	10.92	8.40	10.57	10.60	11.79
152	11.30	9.44	11.37	8.85	11.19	10.94	12.36
153	11.81	9.85	11.76	9.12	11.68	11.65	12.91
154	12.14	10.40	12.37	9.51	12.24	12.28	13.31
155	12.43	10.74	12.43	9.84	12.81	12.88	13.70
156	12.66	11.25	12.60	10.23	13.35	13.56	14.15
157	13.15	11.97	12.82	10.52	13.81	13.84	14.32
158	13.49	12.36	13.20	10.84	14.41	14.39	14.81
159	13.77	12.99	13.21	11.29	14.97	14.79	15.04
160	14.00	13.72	13.80	11.79	15.47	15.28	15.21
161	14.40	14.29	14.32	12.24	15.98	15.57	15.44
162	14.73	14.79	14.87	12.57	16.31	15.96	15.82
163	14.84	15.40	15.31	12.91	16.81	16.13	16.00
164	15.29	15.80	15.82	13.24	16.98	16.30	16.11
165	15.46	16.13	15.98	13.68	17.31	16.14	16.33
166	15.80	16.19	16.42	14.13	17.43	15.75	16.28
167	16.36	16.64	17.03	14.73	17.92	15.74	16.28
168	17.40	17.55	17.64	15.19	18.54	17.18	17.00
169	18.38	18.22	17.92	15.73	18.97	18.71	18.03
170	19.50	18.89	17.98	16.02	19.26	19.74	19.17
171	20.25	19.45	18.59	16.47	19.49	20.26	20.53
172	20.91	19.89	18.70	16.75	19.87	20.48	21.30
173	20.85	19.95	18.70	17.14	20.16	20.54	21.81
174	20.85	20.17	18.98	17.52	20.27	20.65	22.09
175	20.90	20.12	19.59	17.97	20.54	20.88	22.43
176	20.68	19.94	20.02	18.14	20.76	21.20	22.59
177	20.63	19.78	20.37	18.64	20.88	21.21	22.82
178	20.57	19.72	20.42	18.59	20.88	21.21	22.77
179	20.52	19.73	20.09	18.64	20.71	21.27	22.82
180	22.86	22.86	22.86	22.86	22.86	22.86	22.86

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	3016.14	N.A.	36.50
0-30	5050.44	N.A.	61.20
0-40	6483.77	N.A.	78.50
0-60	7806.08	N.A.	94.60
0-80	8212.26	N.A.	99.50
0-90	8231.3	N.A.	99.70
10-90	7296.88	N.A.	88.40
20-40	3467.63	N.A.	42.00
20-50	4312.53	N.A.	52.20
40-70	1600.9	N.A.	19.40
60-80	406.18	N.A.	4.90
70-80	127.60	N.A.	1.50
80-90	19.04	N.A.	0.20
90-110	1.23	N.A.	0.00
90-120	2.16	N.A.	0.00
90-130	3.90	N.A.	0.00
90-150	11.43	N.A.	0.10
90-180	23.12	N.A.	0.30
110-180	21.89	N.A.	0.30
0-180	8254.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	934.42
10-20	2081.72
20-30	2034.3
30-40	1433.33
40-50	844.90
50-60	477.41
60-70	278.59
70-80	127.60
80-90	19.04
90-100	0.57
100-110	0.66
110-120	0.93
120-130	1.73
130-140	3.05
140-150	4.48
150-160	5.41
160-170	4.41
170-180	1.88

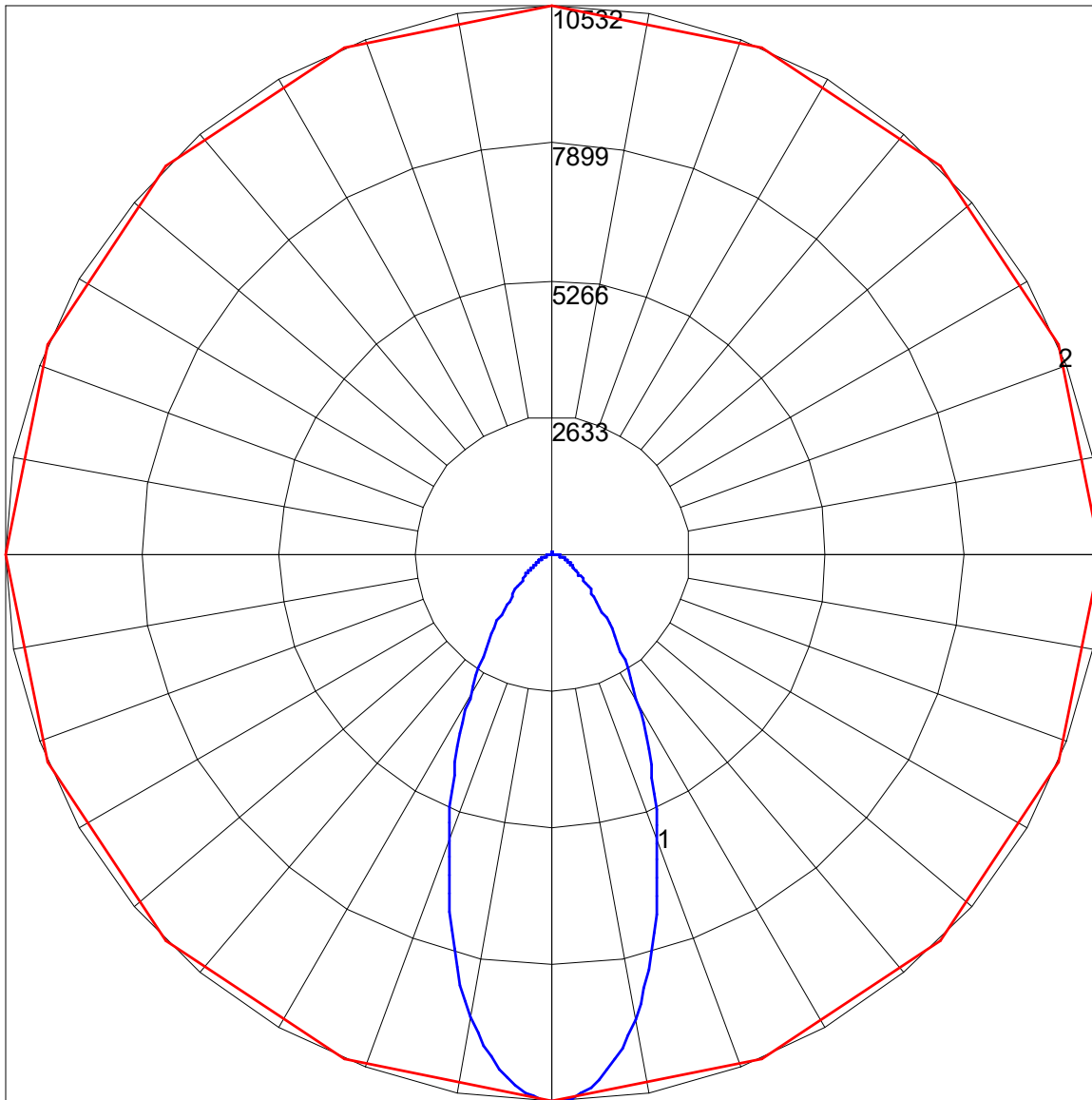
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	111	111	111	106	106	106	102	102	102	100
1	112	109	106	104	110	107	105	102	103	101	99	99	97	96	96	94	93	91
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	74	71	70
5	89	79	73	68	87	78	72	68	77	71	67	75	70	67	73	69	66	64
6	84	74	68	63	82	73	67	63	72	66	62	70	65	62	69	65	61	60
7	80	69	63	58	78	69	63	58	67	62	58	66	61	57	65	60	57	56
8	76	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52
9	72	61	55	51	71	61	55	51	60	54	51	59	54	50	58	54	50	49
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46

POLAR GRAPH



Maximum Candela = 10531.94 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)