



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-OW-SG.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] GEN FROM 13257153.13  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 02/08/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4CS-L15-835-xxx-DIM-UNV-OW-SG  
 [LUMINAIRE] Square Aluminum housing, optics, and trim enclosure  
 [LAMP] One white LED  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Downlight  
 [\_SEARCH\_MOUNTING] Surface, Suspended, Wall

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1233
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	17.3179
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.80
Spacing Criterion (90-270)	0.80
Spacing Criterion (Diagonal)	0.84
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.21 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.00 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	64645	72554	61903
55	31982	42512	30292
65	4411	9646	4411
75	2017	2881	2017
85	1141	1426	1141

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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>
0.0	1350.0	1350.0	1350.0	1350.0	1350.0
0.5	1360.0	1350.0	1348.0	1346.0	1346.0
1.0	1359.0	1350.0	1347.0	1345.0	1345.0
1.5	1357.0	1348.0	1346.0	1343.0	1343.0
2.0	1355.0	1346.0	1343.0	1341.0	1341.0
2.5	1352.0	1342.0	1340.0	1338.0	1338.0
3.0	1348.0	1338.0	1336.0	1334.0	1333.0
3.5	1343.0	1333.0	1331.0	1329.0	1329.0
4.0	1337.0	1328.0	1326.0	1324.0	1323.0
4.5	1331.0	1322.0	1320.0	1318.0	1317.0
5.0	1325.0	1315.0	1313.0	1311.0	1310.0
5.5	1318.0	1308.0	1306.0	1304.0	1303.0
6.0	1310.0	1301.0	1298.0	1296.0	1296.0
6.5	1302.0	1293.0	1290.0	1288.0	1287.0
7.0	1293.0	1284.0	1281.0	1279.0	1278.0
7.5	1284.0	1275.0	1272.0	1270.0	1269.0
8.0	1275.0	1265.0	1262.0	1260.0	1259.0
8.5	1264.0	1255.0	1252.0	1250.0	1249.0
9.0	1253.0	1244.0	1242.0	1239.0	1238.0
9.5	1243.0	1234.0	1231.0	1229.0	1228.0
10.0	1231.0	1222.0	1219.0	1217.0	1216.0
10.5	1218.0	1210.0	1207.0	1205.0	1204.0
11.0	1206.0	1198.0	1194.0	1192.0	1191.0
11.5	1193.0	1184.0	1181.0	1179.0	1179.0
12.0	1180.0	1171.0	1167.0	1165.0	1165.0
12.5	1166.0	1157.0	1154.0	1151.0	1151.0
13.0	1151.0	1142.0	1140.0	1137.0	1137.0
13.5	1137.0	1127.0	1124.0	1122.0	1122.0
14.0	1121.0	1112.0	1109.0	1107.0	1107.0
14.5	1105.0	1096.0	1093.0	1091.0	1091.0
15.0	1089.0	1080.0	1077.0	1075.0	1075.0
15.5	1072.0	1063.0	1060.0	1058.0	1058.0
16.0	1055.0	1047.0	1043.0	1041.0	1042.0
16.5	1038.0	1030.0	1026.0	1024.0	1024.0
17.0	1021.0	1012.0	1009.0	1007.0	1007.0
17.5	1003.0	994.5	991.0	989.4	989.3
18.0	985.4	976.7	973.0	971.3	971.5
18.5	966.5	958.8	955.2	953.1	953.4
19.0	947.9	940.0	936.9	935.2	934.9
19.5	929.7	921.7	918.6	917.2	916.9
20.0	910.7	903.6	900.2	898.8	898.3
20.5	892.4	884.6	881.9	880.2	880.1
21.0	872.8	866.5	863.3	861.2	861.5
21.5	853.3	847.7	844.9	843.1	842.7
22.0	834.9	829.4	826.9	824.3	824.3
22.5	816.0	810.5	808.3	806.0	805.4
23.0	797.3	792.1	790.1	787.7	787.2
23.5	778.5	773.7	772.3	769.4	768.2
24.0	759.1	755.4	754.1	751.4	749.5
24.5	740.0	737.0	736.5	733.3	730.6
25.0	721.2	718.9	718.9	715.4	711.7
25.5	702.3	700.9	701.5	697.5	693.0
26.0	683.5	682.9	684.3	679.8	674.1
26.5	664.5	665.0	667.2	661.9	655.2

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**CANDELA TABULATION - (Cont.)**

27.0	645.4	647.0	650.1	644.2	636.0
27.5	626.3	629.1	633.2	626.3	617.0
28.0	607.0	611.1	616.5	608.4	597.8
28.5	588.0	593.2	599.8	590.5	578.6
29.0	567.7	575.4	583.4	572.8	559.7
29.5	548.4	557.6	567.1	554.9	541.0
30.0	529.2	539.7	550.9	537.0	522.4
30.5	510.4	522.0	534.8	519.0	503.9
31.0	492.0	504.4	518.8	501.3	485.7
31.5	474.0	487.1	503.0	483.9	468.0
32.0	456.5	470.2	487.6	466.9	450.6
32.5	439.6	453.9	472.5	450.3	433.6
33.0	423.2	437.9	457.6	434.1	417.3
33.5	407.3	422.3	443.0	418.3	401.3
34.0	392.2	407.2	428.8	403.0	385.9
34.5	377.6	392.6	414.7	388.2	371.0
35.0	363.7	378.7	401.1	374.1	356.8
35.5	350.6	365.3	387.9	360.6	343.2
36.0	337.9	352.3	375.0	347.4	330.2
36.5	325.7	339.8	362.2	334.8	317.7
37.0	314.0	327.9	349.9	322.7	305.8
37.5	302.9	316.4	337.9	311.1	294.4
38.0	292.4	305.5	326.2	300.0	283.5
38.5	282.3	295.0	315.1	289.4	273.3
39.0	272.6	285.1	304.5	279.3	263.5
39.5	263.3	275.6	294.1	269.6	254.2
40.0	254.4	266.4	284.2	260.3	245.3
40.5	246.0	257.7	274.7	251.4	236.9
41.0	237.9	249.4	265.6	243.0	228.9
41.5	230.2	241.5	257.0	234.9	221.3
42.0	222.8	234.0	248.8	227.4	214.1
42.5	215.8	226.9	240.9	220.0	207.2
43.0	208.9	220.0	233.4	213.1	200.5
43.5	202.3	213.3	226.2	206.4	194.1
44.0	196.0	207.0	219.4	199.9	187.9
44.5	189.9	200.8	212.7	193.7	181.8
45.0	183.9	194.8	206.4	187.7	176.1
45.5	178.0	189.0	200.1	181.9	170.3
46.0	172.1	183.2	194.1	176.1	164.6
46.5	166.4	177.6	188.2	170.4	158.9
47.0	160.8	171.9	182.4	164.9	153.4
47.5	155.2	166.3	176.7	159.3	147.9
48.0	149.6	160.9	171.1	153.9	142.4
48.5	144.0	155.5	165.6	148.5	136.9
49.0	138.6	150.0	160.2	143.2	131.5
49.5	133.1	144.6	154.9	138.0	126.1
50.0	127.6	139.3	149.6	132.8	120.7
50.5	122.2	133.9	144.4	127.5	115.4
51.0	116.8	128.7	139.1	122.4	110.1
51.5	111.4	123.5	134.0	117.4	104.9
52.0	105.9	118.3	128.9	112.3	99.7
52.5	100.4	113.0	123.7	107.2	94.5
53.0	95.0	107.8	118.5	102.2	89.5
53.5	89.6	102.6	113.4	97.3	84.4
54.0	84.4	97.5	108.2	92.3	79.5
54.5	79.0	92.4	103.1	87.4	74.6

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**CANDELA TABULATION - (Cont.)**

55.0	73.8	87.3	98.1	82.5	69.9
55.5	68.6	82.2	93.0	77.7	65.2
56.0	63.8	77.2	87.9	73.0	60.7
56.5	58.9	72.2	82.7	68.4	56.3
57.0	54.3	67.4	77.8	63.8	51.9
57.5	49.8	62.7	72.8	59.4	47.8
58.0	45.5	58.0	67.9	55.1	43.8
58.5	41.4	53.5	63.2	50.8	40.0
59.0	37.5	49.1	58.5	46.8	36.3
59.5	33.8	44.9	53.9	42.9	32.8
60.0	30.2	40.9	49.5	39.1	29.4
60.5	26.7	37.1	45.3	35.5	26.0
61.0	23.5	33.4	41.2	32.2	22.8
61.5	20.6	30.0	37.2	28.8	20.0
62.0	18.0	26.6	33.5	25.7	17.5
62.5	15.6	23.5	30.0	22.8	15.3
63.0	13.2	20.7	26.8	20.1	13.0
63.5	11.1	18.3	23.8	17.6	10.4
64.0	9.3	16.0	21.1	15.4	8.9
64.5	8.1	13.8	18.5	13.3	8.1
65.0	7.5	11.9	16.4	11.7	7.5
65.5	6.9	10.5	14.4	10.0	6.9
66.0	6.5	9.4	12.8	8.9	6.5
66.5	6.1	8.5	11.3	8.3	6.0
67.0	5.6	7.8	10.1	7.7	5.7
67.5	5.2	7.2	9.0	7.2	5.3
68.0	4.9	6.7	8.2	6.7	5.0
68.5	4.6	6.3	7.4	6.3	4.6
69.0	4.3	5.9	6.8	5.9	4.4
69.5	4.0	5.5	6.3	5.5	4.1
70.0	3.8	5.2	5.8	5.2	3.9
70.5	3.6	4.8	5.4	4.8	3.6
71.0	3.3	4.5	5.0	4.5	3.4
71.5	3.1	4.3	4.7	4.2	3.2
72.0	3.0	4.0	4.4	3.9	3.0
72.5	2.8	3.7	4.1	3.7	2.9
73.0	2.6	3.5	3.8	3.5	2.7
73.5	2.5	3.2	3.6	3.2	2.5
74.0	2.3	3.0	3.4	3.0	2.3
74.5	2.2	2.8	3.2	2.8	2.2
75.0	2.1	2.6	3.0	2.6	2.1
75.5	1.9	2.4	2.8	2.5	1.9
76.0	1.8	2.3	2.6	2.3	1.9
76.5	1.6	2.1	2.4	2.1	1.7
77.0	1.6	2.0	2.2	2.0	1.6
77.5	1.5	1.9	2.1	1.9	1.5
78.0	1.4	1.7	1.9	1.7	1.4
78.5	1.2	1.6	1.8	1.6	1.2
79.0	1.1	1.5	1.7	1.5	1.2
79.5	1.1	1.4	1.5	1.4	1.1
80.0	1.0	1.2	1.4	1.2	1.0
80.5	0.9	1.2	1.3	1.2	0.9
81.0	0.8	1.1	1.2	1.1	0.9
81.5	0.8	1.0	1.1	1.0	0.8
82.0	0.7	0.9	1.0	0.9	0.7
82.5	0.6	0.8	0.9	0.8	0.7

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CANDELA TABULATION - (Cont.)

83.0	0.6	0.7	0.8	0.7	0.7
83.5	0.5	0.7	0.8	0.7	0.6
84.0	0.5	0.6	0.7	0.6	0.5
84.5	0.4	0.6	0.6	0.6	0.5
85.0	0.4	0.5	0.5	0.5	0.4
85.5	0.3	0.4	0.4	0.4	0.4
86.0	0.3	0.3	0.4	0.4	0.3
86.5	0.3	0.3	0.3	0.3	0.3
87.0	0.3	0.3	0.3	0.3	0.2
87.5	0.2	0.3	0.2	0.2	0.2
88.0	0.2	0.2	0.2	0.2	0.2
88.5	0.1	0.2	0.1	0.2	0.2
89.0	0.1	0.1	0.1	0.1	0.1
89.5	0.1	0.1	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0
90.5	0.0	0.0	0.0	0.0	0.0
91.0	0.0	0.0	0.0	0.0	0.0
91.5	0.0	0.0	0.0	0.0	0.0
92.0	0.0	0.0	0.0	0.0	0.0
92.5	0.0	0.0	0.0	0.0	0.0
93.0	0.0	0.0	0.0	0.0	0.0
93.5	0.0	0.0	0.0	0.0	0.0
94.0	0.0	0.0	0.0	0.0	0.0
94.5	0.0	0.0	0.0	0.0	0.0
95.0	0.0	0.0	0.0	0.0	0.0
95.5	0.0	0.0	0.0	0.0	0.0
96.0	0.0	0.0	0.0	0.0	0.0
96.5	0.0	0.0	0.0	0.0	0.0
97.0	0.0	0.0	0.0	0.0	0.0
97.5	0.0	0.0	0.0	0.0	0.0
98.0	0.0	0.0	0.0	0.0	0.0
98.5	0.0	0.0	0.0	0.0	0.0
99.0	0.0	0.0	0.0	0.0	0.0
99.5	0.0	0.0	0.0	0.0	0.0
100.0	0.0	0.0	0.0	0.0	0.0
100.5	0.0	0.0	0.0	0.0	0.0
101.0	0.0	0.0	0.0	0.0	0.0
101.5	0.0	0.0	0.0	0.0	0.0
102.0	0.0	0.0	0.0	0.0	0.0
102.5	0.0	0.0	0.0	0.0	0.0
103.0	0.0	0.0	0.0	0.0	0.0
103.5	0.0	0.0	0.0	0.0	0.0
104.0	0.0	0.0	0.0	0.0	0.0
104.5	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0
105.5	0.0	0.0	0.0	0.0	0.0
106.0	0.0	0.0	0.0	0.0	0.0
106.5	0.0	0.0	0.0	0.0	0.0
107.0	0.0	0.0	0.0	0.0	0.0
107.5	0.0	0.0	0.0	0.0	0.0
108.0	0.0	0.0	0.0	0.0	0.0
108.5	0.0	0.0	0.0	0.0	0.0
109.0	0.0	0.0	0.0	0.0	0.0
109.5	0.0	0.0	0.0	0.0	0.0
110.0	0.0	0.0	0.0	0.0	0.0
110.5	0.0	0.0	0.0	0.0	0.0

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CANDELA TABULATION - (Cont.)

111.0	0.0	0.0	0.0	0.0	0.0
111.5	0.0	0.0	0.0	0.0	0.0
112.0	0.0	0.0	0.0	0.0	0.0
112.5	0.0	0.0	0.0	0.0	0.0
113.0	0.0	0.0	0.0	0.0	0.0
113.5	0.0	0.0	0.0	0.0	0.0
114.0	0.0	0.0	0.0	0.0	0.0
114.5	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0
115.5	0.0	0.0	0.0	0.0	0.0
116.0	0.0	0.0	0.0	0.0	0.0
116.5	0.0	0.0	0.0	0.0	0.0
117.0	0.0	0.0	0.0	0.0	0.0
117.5	0.0	0.0	0.0	0.0	0.0
118.0	0.0	0.0	0.0	0.0	0.0
118.5	0.0	0.0	0.0	0.0	0.0
119.0	0.0	0.0	0.0	0.0	0.0
119.5	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0
120.5	0.0	0.0	0.0	0.0	0.0
121.0	0.0	0.0	0.0	0.0	0.0
121.5	0.0	0.0	0.0	0.0	0.0
122.0	0.0	0.0	0.0	0.0	0.0
122.5	0.0	0.0	0.0	0.0	0.0
123.0	0.0	0.0	0.0	0.0	0.0
123.5	0.0	0.0	0.0	0.0	0.0
124.0	0.0	0.0	0.0	0.0	0.0
124.5	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0
125.5	0.0	0.0	0.0	0.0	0.0
126.0	0.0	0.0	0.0	0.0	0.0
126.5	0.0	0.0	0.0	0.0	0.0
127.0	0.0	0.0	0.0	0.0	0.0
127.5	0.0	0.0	0.0	0.0	0.0
128.0	0.0	0.0	0.0	0.0	0.0
128.5	0.0	0.0	0.0	0.0	0.0
129.0	0.0	0.0	0.0	0.0	0.0
129.5	0.0	0.0	0.0	0.0	0.0
130.0	0.0	0.0	0.0	0.0	0.0
130.5	0.0	0.0	0.0	0.0	0.0
131.0	0.0	0.0	0.0	0.0	0.0
131.5	0.0	0.0	0.0	0.0	0.0
132.0	0.0	0.0	0.0	0.0	0.0
132.5	0.0	0.0	0.0	0.0	0.0
133.0	0.0	0.0	0.0	0.0	0.0
133.5	0.0	0.0	0.0	0.0	0.0
134.0	0.0	0.0	0.0	0.0	0.0
134.5	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0
135.5	0.0	0.0	0.0	0.0	0.0
136.0	0.0	0.0	0.0	0.0	0.0
136.5	0.0	0.0	0.0	0.0	0.0
137.0	0.0	0.0	0.0	0.0	0.0
137.5	0.0	0.0	0.0	0.0	0.0
138.0	0.0	0.0	0.0	0.0	0.0
138.5	0.0	0.0	0.0	0.0	0.0

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CANDELA TABULATION - (Cont.)

139.0	0.0	0.0	0.0	0.0	0.0
139.5	0.0	0.0	0.0	0.0	0.0
140.0	0.0	0.0	0.0	0.0	0.0
140.5	0.0	0.0	0.0	0.0	0.0
141.0	0.0	0.0	0.0	0.0	0.0
141.5	0.0	0.0	0.0	0.0	0.0
142.0	0.0	0.0	0.0	0.0	0.0
142.5	0.0	0.0	0.0	0.0	0.0
143.0	0.0	0.0	0.0	0.0	0.0
143.5	0.0	0.0	0.0	0.0	0.0
144.0	0.0	0.0	0.0	0.0	0.0
144.5	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0
145.5	0.0	0.0	0.0	0.0	0.0
146.0	0.0	0.0	0.0	0.0	0.0
146.5	0.0	0.0	0.0	0.0	0.0
147.0	0.0	0.0	0.0	0.0	0.0
147.5	0.0	0.0	0.0	0.0	0.0
148.0	0.0	0.0	0.0	0.0	0.0
148.5	0.0	0.0	0.0	0.0	0.0
149.0	0.0	0.0	0.0	0.0	0.0
149.5	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0
150.5	0.0	0.0	0.0	0.0	0.0
151.0	0.0	0.0	0.0	0.0	0.0
151.5	0.0	0.0	0.0	0.0	0.0
152.0	0.0	0.0	0.0	0.0	0.0
152.5	0.0	0.0	0.0	0.0	0.0
153.0	0.0	0.0	0.0	0.0	0.0
153.5	0.0	0.0	0.0	0.0	0.0
154.0	0.0	0.0	0.0	0.0	0.0
154.5	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0
155.5	0.0	0.0	0.0	0.0	0.0
156.0	0.0	0.0	0.0	0.0	0.0
156.5	0.0	0.0	0.0	0.0	0.0
157.0	0.0	0.0	0.0	0.0	0.0
157.5	0.0	0.0	0.0	0.0	0.0
158.0	0.0	0.0	0.0	0.0	0.0
158.5	0.0	0.0	0.0	0.0	0.0
159.0	0.0	0.0	0.0	0.0	0.0
159.5	0.0	0.0	0.0	0.0	0.0
160.0	0.0	0.0	0.0	0.0	0.0
160.5	0.0	0.0	0.0	0.0	0.0
161.0	0.0	0.0	0.0	0.0	0.0
161.5	0.0	0.0	0.0	0.0	0.0
162.0	0.0	0.0	0.0	0.0	0.0
162.5	0.0	0.0	0.0	0.0	0.0
163.0	0.0	0.0	0.0	0.0	0.0
163.5	0.0	0.0	0.0	0.0	0.0
164.0	0.0	0.0	0.0	0.0	0.0
164.5	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0
165.5	0.0	0.0	0.0	0.0	0.0
166.0	0.0	0.0	0.0	0.0	0.0
166.5	0.0	0.0	0.0	0.0	0.0

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

167.0	0.0	0.0	0.0	0.0	0.0
167.5	0.0	0.0	0.0	0.0	0.0
168.0	0.0	0.0	0.0	0.0	0.0
168.5	0.0	0.0	0.0	0.0	0.0
169.0	0.0	0.0	0.0	0.0	0.0
169.5	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0
170.5	0.0	0.0	0.0	0.0	0.0
171.0	0.0	0.0	0.0	0.0	0.0
171.5	0.0	0.0	0.0	0.0	0.0
172.0	0.0	0.0	0.0	0.0	0.0
172.5	0.0	0.0	0.0	0.0	0.0
173.0	0.0	0.0	0.0	0.0	0.0
173.5	0.0	0.0	0.0	0.0	0.0
174.0	0.0	0.0	0.0	0.0	0.0
174.5	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0
175.5	0.0	0.0	0.0	0.0	0.0
176.0	0.0	0.0	0.0	0.0	0.0
176.5	0.0	0.0	0.0	0.0	0.0
177.0	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0
178.0	0.0	0.0	0.0	0.0	0.0
178.5	0.0	0.0	0.0	0.0	0.0
179.0	0.0	0.0	0.0	0.0	0.0
179.5	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0



**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	421.50	N.A.	34.20
0-30	748.79	N.A.	60.70
0-40	988.05	N.A.	80.20
0-60	1213.82	N.A.	98.50
0-80	1232.1	N.A.	100.00
0-90	1232.67	N.A.	100.00
10-90	1110.23	N.A.	90.10
20-40	566.55	N.A.	46.00
20-50	716.12	N.A.	58.10
40-70	241.16	N.A.	19.60
60-80	18.28	N.A.	1.50
70-80	2.89	N.A.	0.20
80-90	0.57	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1232.67	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	122.44
10-20	299.06
20-30	327.29
30-40	239.26
40-50	149.56
50-60	76.21
60-70	15.39
70-80	2.89
80-90	0.57
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

**IES INDOOR REPORT**  
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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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77
4	95	86	80	76	93	85	80	75	83	78	74	81	77	73	79	75	72	71
5	89	80	74	69	88	79	73	69	77	72	68	76	71	67	74	70	67	65
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56
8	76	65	59	54	74	65	59	54	64	58	54	62	57	54	61	57	53	52
9	72	61	55	51	71	61	55	51	60	54	50	59	54	50	58	53	50	49
10	68	58	52	47	67	57	51	47	56	51	47	56	51	47	55	50	47	46

**IES INDOOR REPORT**  
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**UGR TABLE - CORRECTED**

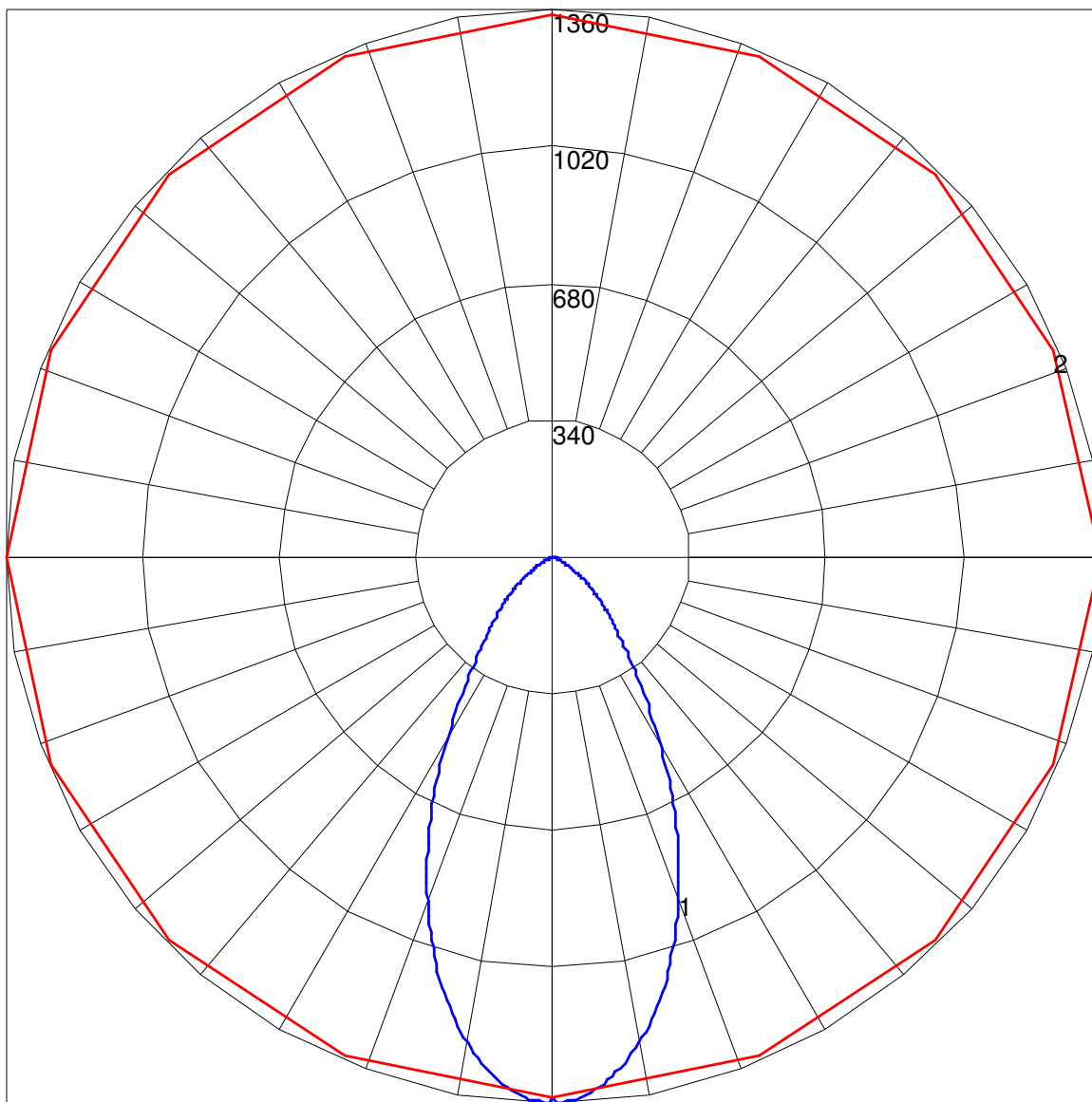
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.0	21.2	20.4	21.5	21.8	19.7	20.8	20.0	21.1	21.5
	3H	19.9	20.9	20.3	21.3	21.6	19.6	20.6	20.0	20.9	21.3
	4H	19.8	20.8	20.2	21.1	21.5	19.5	20.4	19.9	20.8	21.2
	6H	19.8	20.6	20.2	21.0	21.4	19.4	20.3	19.8	20.6	21.0
	8H	19.7	20.5	20.1	20.9	21.3	19.4	20.2	19.8	20.6	21.0
	12H	19.7	20.4	20.1	20.8	21.2	19.3	20.1	19.7	20.5	20.9
4H	2H	19.9	20.9	20.3	21.2	21.6	19.6	20.5	20.0	20.9	21.2
	3H	19.8	20.6	20.2	21.0	21.4	19.5	20.2	19.9	20.7	21.1
	4H	19.8	20.4	20.2	20.8	21.3	19.4	20.1	19.9	20.5	21.0
	6H	19.7	20.2	20.1	20.7	21.2	19.3	19.9	19.8	20.4	20.8
	8H	19.6	20.1	20.1	20.6	21.1	19.3	19.8	19.7	20.3	20.7
	12H	19.5	20.0	20.0	20.5	21.0	19.2	19.7	19.7	20.2	20.6
8H	4H	19.6	20.1	20.1	20.6	21.1	19.3	19.8	19.7	20.2	20.7
	6H	19.5	19.9	20.0	20.4	20.9	19.2	19.6	19.7	20.1	20.6
	8H	19.4	19.8	20.0	20.3	20.8	19.1	19.5	19.6	20.0	20.5
	12H	19.4	19.7	19.9	20.2	20.8	19.1	19.4	19.6	19.9	20.5
12H	4H	19.5	20.0	20.0	20.5	21.0	19.2	19.7	19.7	20.2	20.6
	6H	19.4	19.8	20.0	20.3	20.8	19.1	19.5	19.6	20.0	20.5
	8H	19.4	19.7	19.9	20.2	20.8	19.1	19.4	19.6	19.9	20.5

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 1360 Located At Horizontal Angle = 0, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)