

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P855245

Luminaire Tested: SQ2-FA-150U-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855245
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-150U-100D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

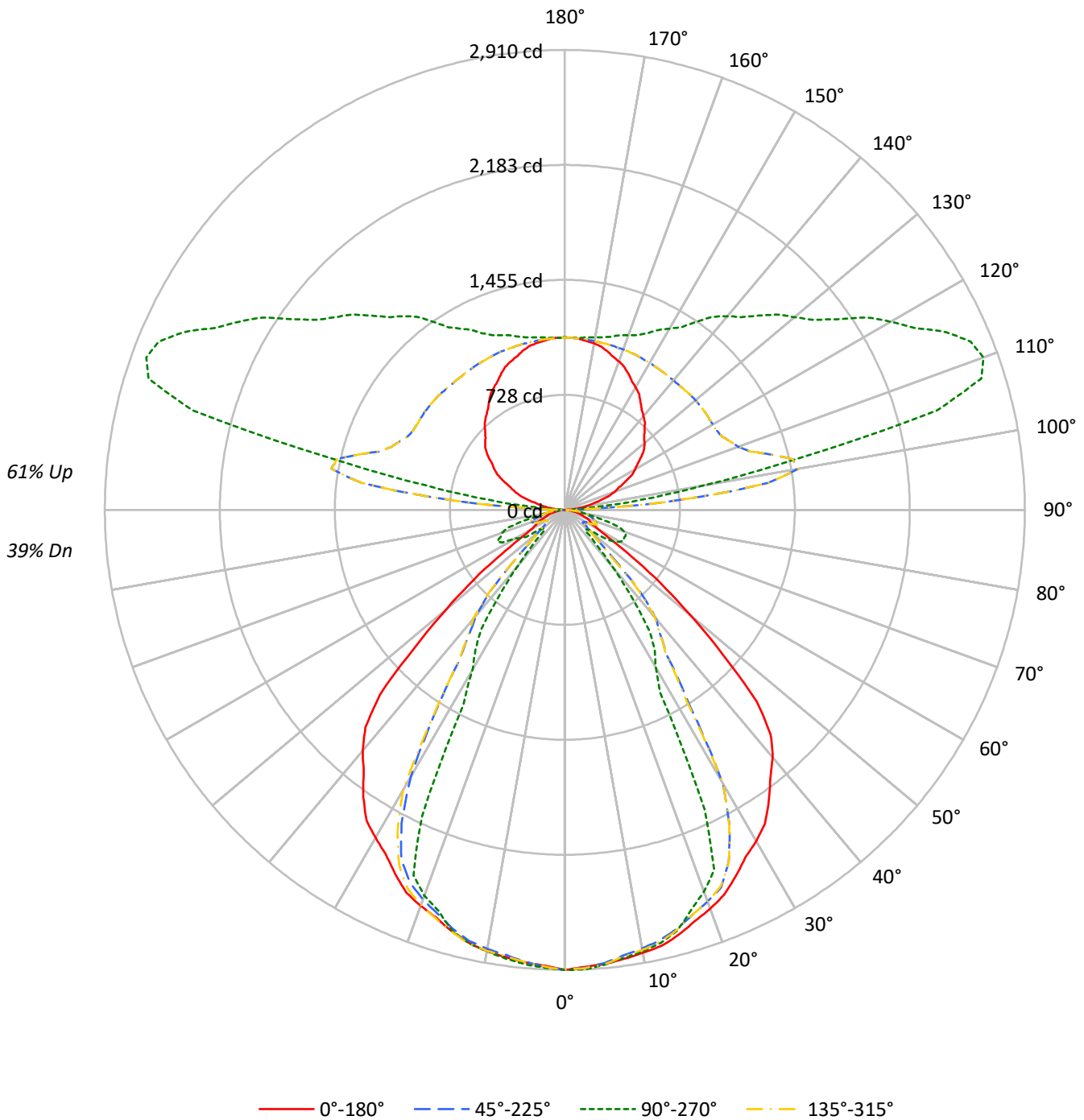
Lumens per Lamp: N/A
Luminaire Lumens: 10980.5 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 94.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																		
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	92	89	85	87	84	81	78	69	67	65	55	53	52	42	41	40	34
2	88	82	76	71	80	75	70	66	61	58	55	49	47	45	38	37	35	30
3	81	73	66	61	74	67	61	56	55	51	48	44	42	39	35	33	31	27
4	75	65	58	52	68	60	54	49	50	45	42	40	37	35	32	30	28	24
5	69	59	51	46	63	54	48	43	45	40	37	37	34	31	29	27	25	22
6	64	53	46	40	58	49	43	38	41	36	33	34	31	28	27	25	23	20
7	60	48	41	36	54	45	38	34	38	33	29	31	28	25	25	23	21	18
8	56	44	37	32	51	41	35	30	35	30	27	29	26	23	24	21	19	17
9	52	41	34	29	48	38	32	27	32	27	24	27	23	21	22	20	18	16
10	49	38	31	26	45	35	29	25	30	25	22	25	22	19	21	18	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	46992	46992	46992	46992
5°	46746	46817	46567	46780
10°	46673	46493	46493	46493
15°	46522	46046	46156	46046
20°	46161	44201	45823	44615
25°	45555	37303	45243	38085
30°	45136	21403	44646	21690
35°	44346	18386	43781	18128
40°	43117	9670	41914	9577
45°	39192	4160	37787	4160
50°	25859	5016	24533	4687
55°	14460	9267	13717	8403
60°	7798	13043	7656	11693
65°	6873	15851	7213	18029
70°	6425	18958	6113	19997
75°	6020	16294	6163	16843
80°	5105	11641	5105	12245
85°	4465	6502	4076	7744

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 39192 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.9	2.5
10°-20°	777.0	7.1
20°-30°	1059.5	9.6
30°-40°	890.3	8.1
40°-50°	505.7	4.6
50°-60°	268.3	2.4
60°-70°	247.0	2.2
70°-80°	181.4	1.7
80°-90°	48.6	0.4
90°-100°	415.4	3.8
100°-110°	1360.2	12.4
110°-120°	1344.7	12.2
120°-130°	1099.2	10.0
130°-140°	897.0	8.2
140°-150°	698.1	6.4
150°-160°	502.7	4.6
160°-170°	307.5	2.8
170°-180°	103.9	0.9
0°-30°	2110.4	19.2
0°-40°	3000.7	27.3
0°-60°	3774.7	34.4
0°-90°	4251.7	38.7
90°-120°	3120.3	28.4
90°-150°	5814.7	53.0
90°-180°	6729.0	61.3
0°-180°	10980.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2910	2910	2910	2910	2910	
5°	2884	2889	2873	2886	2884	274
15°	2783	2755	2761	2755	2783	785
25°	2557	2094	2540	2138	2557	1179
35°	2250	933	2221	920	2250	1405
45°	1716	182	1655	182	1716	1255
55°	514	329	487	298	514	495
65°	180	415	189	472	180	181
75°	96	261	99	270	96	100
85°	24	35	22	42	24	27
90°	1	9	1	9	1	4
95°	58	175	58	175	58	66
105°	236	2437	236	2437	236	249
115°	426	2661	426	2661	426	421
125°	593	2100	593	2100	593	527
135°	714	1738	714	1738	714	552
145°	835	1453	835	1453	835	523
155°	951	1232	951	1232	951	438
165°	1039	1135	1039	1135	1039	293
175°	1086	1092	1086	1092	1086	103
180°	1090	1090	1090	1090	1090	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2894.7	2937.6	2900.0	2895.0	2910.5	2907.0	2901.7	2922.0	2887.7	2922.0	2894.7
5°	2884.2	2933.5	2877.6	2862.8	2888.6	2871.4	2886.3	2916.1	2873.2	2911.8	2868.8
7.5°	2866.2	2910.0	2842.9	2833.3	2858.7	2843.6	2849.9	2891.2	2855.2	2880.5	2841.6
10°	2846.8	2885.4	2818.3	2812.3	2835.8	2820.8	2827.1	2870.2	2835.8	2859.5	2820.4
12.5°	2825.8	2855.8	2788.4	2785.8	2806.0	2796.1	2798.9	2835.3	2807.8	2831.4	2794.2
15°	2783.2	2811.1	2743.7	2733.2	2754.7	2746.1	2750.3	2782.6	2761.3	2776.2	2743.7
17.5°	2730.5	2752.8	2685.7	2654.1	2655.0	2665.7	2685.7	2724.8	2705.5	2725.3	2679.1
20°	2686.6	2712.4	2638.4	2576.8	2572.5	2583.2	2638.4	2677.6	2666.9	2688.3	2623.0
22.5°	2635.6	2652.8	2585.6	2481.7	2467.1	2477.9	2578.6	2625.0	2621.2	2635.8	2554.5
25°	2557.1	2574.3	2451.7	2302.1	2093.9	2289.2	2456.2	2539.6	2539.6	2552.5	2445.2
27.5°	2477.2	2477.7	2256.0	1478.5	1304.2	1425.2	2252.9	2433.8	2454.4	2447.9	2237.1
30°	2421.0	2406.0	1999.5	1195.2	1148.0	1177.9	2001.8	2360.3	2394.7	2371.1	1949.1
32.5°	2356.0	2313.6	1476.4	1098.7	1060.1	1086.7	1427.6	2273.2	2333.3	2282.1	1533.0
35°	2249.9	2138.2	1126.0	971.5	932.8	967.2	1117.2	2101.0	2221.2	2084.0	1163.4
37.5°	2135.2	1699.5	991.2	773.8	690.5	757.1	986.4	1681.3	2088.7	1642.3	990.3
40°	2045.7	1335.3	891.2	566.1	458.8	533.8	884.5	1273.9	1988.6	1370.6	869.2
42.5°	1926.3	1173.0	715.6	359.5	281.4	329.1	686.1	1145.9	1865.7	1187.5	691.9
45°	1716.4	1008.2	423.6	197.2	182.2	190.8	390.7	989.6	1654.9	968.3	432.4
47.5°	1359.6	769.0	272.2	167.6	183.9	167.6	263.8	744.5	1284.0	743.2	271.7
50°	1029.5	600.2	210.7	169.6	199.7	169.6	204.2	579.8	976.7	633.4	208.6
52.5°	762.5	501.6	172.1	186.0	240.1	189.4	167.3	488.2	723.9	510.9	162.8
55°	513.7	393.5	138.3	245.6	329.2	252.0	138.3	382.2	487.3	377.9	133.9
57.5°	325.7	292.6	140.0	315.7	375.8	321.7	142.3	282.1	312.6	283.4	122.9
60°	241.5	230.7	155.8	335.2	403.9	339.5	158.0	222.0	237.1	219.9	131.7
62.5°	199.3	181.7	187.4	363.0	419.6	353.5	191.4	173.3	207.2	166.0	145.8
65°	179.9	117.7	221.7	367.7	414.9	367.7	223.8	111.5	188.8	120.1	197.6
67.5°	162.4	87.4	214.2	365.1	417.5	366.0	208.9	83.3	155.8	81.1	201.9
70°	136.1	78.1	201.9	371.6	401.6	358.7	201.9	75.8	129.5	73.7	237.1
72.5°	113.3	74.2	187.9	343.1	356.0	330.2	189.7	73.8	113.7	66.4	223.1
75°	96.5	73.0	179.9	274.1	261.2	261.2	175.6	70.8	98.8	66.5	173.4
77.5°	72.4	64.7	149.3	178.9	169.0	169.0	146.7	62.5	68.9	58.6	140.9
80°	54.9	59.2	122.9	131.5	125.2	125.2	118.5	57.0	54.9	54.9	116.3
82.5°	42.6	50.4	94.8	96.4	91.8	90.1	92.2	49.9	42.6	46.1	90.0
85°	24.1	34.9	50.5	41.5	35.1	32.9	48.3	32.7	22.0	32.7	48.3
87.5°	9.1	16.3	8.8	8.6	8.8	8.6	8.8	16.3	9.1	14.6	10.5
90°	1.1	3.3	8.9	7.9	8.9	7.9	8.9	3.3	1.1	3.3	8.9
92.5°	19.0	69.5	213.3	69.4	55.6	69.4	213.3	69.5	19.0	69.5	213.3
95°	58.3	169.0	755.2	269.0	174.8	269.0	755.2	169.0	58.3	169.0	755.2
97.5°	105.8	222.8	1295.6	783.8	485.8	783.8	1295.6	222.8	105.8	222.8	1295.6
100°	139.0	250.7	1499.1	1338.8	887.3	1338.8	1499.1	250.7	139.0	250.7	1499.1
102.5°	176.5	285.7	1476.7	1972.6	1529.2	1972.6	1476.7	285.7	176.5	285.7	1476.7
105°	236.4	337.2	1350.1	2565.1	2436.9	2565.1	1350.1	337.2	236.4	337.2	1350.1
107.5°	295.4	387.8	1226.6	2620.5	2761.4	2620.5	1226.6	387.8	295.4	387.8	1226.6
110°	333.8	423.7	1167.5	2556.1	2817.8	2556.1	1167.5	423.7	333.8	423.7	1167.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	370.6	457.9	1131.7	2443.8	2779.4	2443.8	1131.7	457.9	370.6	457.9	1131.7
115°	425.7	509.0	1096.9	2266.6	2661.0	2266.6	1096.9	509.0	425.7	509.0	1096.9
117.5°	479.4	557.1	1083.7	2092.4	2492.9	2092.4	1083.7	557.1	479.4	557.1	1083.7
120°	514.2	587.7	1080.1	1990.9	2380.9	1990.9	1080.1	587.7	514.2	587.7	1080.1
122.5°	545.7	617.3	1080.1	1903.3	2265.3	1903.3	1080.1	617.3	545.7	617.3	1080.1
125°	592.7	660.7	1081.2	1787.5	2099.7	1787.5	1081.2	660.7	592.7	660.7	1081.2
127.5°	632.6	701.9	1079.8	1702.0	1973.7	1702.0	1079.8	701.9	632.6	701.9	1079.8
130°	657.7	727.8	1078.9	1650.4	1895.8	1650.4	1078.9	727.8	657.7	727.8	1078.9
132.5°	680.1	752.0	1076.3	1605.9	1828.5	1605.9	1076.3	752.0	680.1	752.0	1076.3
135°	713.7	789.3	1072.3	1541.7	1737.8	1541.7	1072.3	789.3	713.7	789.3	1072.3
137.5°	749.2	824.1	1069.8	1474.7	1652.0	1474.7	1069.8	824.1	749.2	824.1	1069.8
140°	774.2	846.5	1068.9	1432.3	1599.9	1432.3	1068.9	846.5	774.2	846.5	1068.9
142.5°	799.3	867.2	1068.9	1387.2	1539.1	1387.2	1068.9	867.2	799.3	867.2	1068.9
145°	834.7	896.1	1070.0	1326.1	1453.2	1326.1	1070.0	896.1	834.7	896.1	1070.0
147.5°	871.9	923.0	1071.6	1273.0	1369.0	1273.0	1071.6	923.0	871.9	923.0	1071.6
150°	895.3	940.2	1073.4	1242.1	1323.3	1242.1	1073.4	940.2	895.3	940.2	1073.4
152.5°	918.6	958.2	1074.3	1216.8	1283.8	1216.8	1074.3	958.2	918.6	958.2	1074.3
155°	951.3	983.0	1076.8	1186.4	1232.5	1186.4	1076.8	983.0	951.3	983.0	1076.8
157.5°	980.6	1003.6	1079.2	1162.7	1195.9	1162.7	1079.2	1003.6	980.6	1003.6	1079.2
160°	999.4	1018.0	1080.1	1149.1	1175.3	1149.1	1080.1	1018.0	999.4	1018.0	1080.1
162.5°	1015.6	1030.7	1080.1	1138.1	1157.4	1138.1	1080.1	1030.7	1015.6	1030.7	1080.1
165°	1038.6	1048.5	1081.2	1122.9	1134.9	1122.9	1081.2	1048.5	1038.6	1048.5	1081.2
167.5°	1058.1	1063.0	1082.5	1111.2	1117.7	1111.2	1082.5	1063.0	1058.1	1063.0	1082.5
170°	1068.9	1071.1	1083.5	1104.8	1107.0	1104.8	1083.5	1071.1	1068.9	1071.1	1083.5
172.5°	1077.0	1078.2	1086.2	1100.3	1100.7	1100.3	1086.2	1078.2	1077.0	1078.2	1086.2
175°	1085.7	1085.7	1086.8	1094.7	1092.4	1094.7	1086.8	1085.7	1085.7	1085.7	1086.8
177.5°	1090.1	1089.3	1088.4	1093.6	1090.1	1093.6	1088.4	1089.3	1090.1	1089.3	1088.4
180°	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2887.9	2900.0	2900.0	2892.9	2927.3	2894.7
5°	2858.5	2886.3	2873.4	2873.2	2916.3	2884.2
7.5°	2837.8	2863.9	2851.9	2849.4	2891.9	2866.2
10°	2816.5	2835.8	2827.2	2833.7	2872.6	2846.8
12.5°	2786.7	2809.5	2801.0	2810.8	2846.4	2825.8
15°	2735.3	2754.7	2758.9	2763.4	2804.6	2783.2
17.5°	2650.4	2659.9	2681.3	2711.6	2754.6	2730.5
20°	2583.7	2596.6	2609.5	2662.5	2712.4	2686.6
22.5°	2507.9	2503.6	2533.6	2595.7	2658.1	2635.6
25°	2303.2	2137.8	2320.3	2480.3	2563.6	2557.1
27.5°	1603.7	1391.6	1579.1	2289.4	2464.3	2477.2
30°	1262.0	1163.4	1259.9	2043.4	2391.0	2421.0
32.5°	1120.5	1052.7	1111.5	1555.4	2298.5	2356.0
35°	966.9	919.7	966.9	1163.4	2116.8	2249.9
37.5°	773.9	677.3	772.2	1005.3	1711.2	2135.2
40°	576.7	454.4	559.5	899.9	1367.5	2045.7
42.5°	384.2	292.8	363.6	708.5	1182.8	1926.3
45°	207.9	182.2	199.4	428.0	965.3	1716.4
47.5°	163.1	172.5	163.1	270.0	738.4	1359.6
50°	156.5	186.6	156.5	208.6	610.9	1029.5
52.5°	170.7	202.3	168.8	164.7	498.5	762.5
55°	193.4	298.5	195.6	133.9	365.5	513.7
57.5°	275.3	335.9	278.3	126.9	281.6	325.7
60°	282.8	362.1	280.7	133.9	217.8	241.5
62.5°	334.4	448.3	334.1	153.2	161.9	199.3
65°	429.0	471.9	433.3	195.3	115.7	179.9
67.5°	407.2	437.6	402.9	209.4	79.6	162.4
70°	400.0	423.6	395.7	239.2	73.9	136.1
72.5°	373.2	376.2	365.5	221.7	66.4	113.3
75°	289.3	270.0	278.6	190.9	66.5	96.5
77.5°	179.8	172.1	173.4	145.8	58.7	72.4
80°	136.0	131.7	129.6	122.9	54.9	54.9
82.5°	100.8	96.5	94.4	94.8	46.1	42.6
85°	45.9	41.8	39.6	54.9	32.7	24.1
87.5°	10.3	10.5	8.6	10.5	12.9	9.1
90°	7.9	8.9	7.9	8.9	3.3	1.1
92.5°	69.4	55.6	69.4	213.3	69.5	19.0
95°	269.0	174.8	269.0	755.2	169.0	58.3
97.5°	783.8	485.8	783.8	1295.6	222.8	105.8
100°	1338.8	887.3	1338.8	1499.1	250.7	139.0
102.5°	1972.6	1529.2	1972.6	1476.7	285.7	176.5
105°	2565.1	2436.9	2565.1	1350.1	337.2	236.4
107.5°	2620.5	2761.4	2620.5	1226.6	387.8	295.4
110°	2556.1	2817.8	2556.1	1167.5	423.7	333.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2443.8	2779.4	2443.8	1131.7	457.9	370.6
115°	2266.6	2661.0	2266.6	1096.9	509.0	425.7
117.5°	2092.4	2492.9	2092.4	1083.7	557.1	479.4
120°	1990.9	2380.9	1990.9	1080.1	587.7	514.2
122.5°	1903.3	2265.3	1903.3	1080.1	617.3	545.7
125°	1787.5	2099.7	1787.5	1081.2	660.7	592.7
127.5°	1702.0	1973.7	1702.0	1079.8	701.9	632.6
130°	1650.4	1895.8	1650.4	1078.9	727.8	657.7
132.5°	1605.9	1828.5	1605.9	1076.3	752.0	680.1
135°	1541.7	1737.8	1541.7	1072.3	789.3	713.7
137.5°	1474.7	1652.0	1474.7	1069.8	824.1	749.2
140°	1432.3	1599.9	1432.3	1068.9	846.5	774.2
142.5°	1387.2	1539.1	1387.2	1068.9	867.2	799.3
145°	1326.1	1453.2	1326.1	1070.0	896.1	834.7
147.5°	1273.0	1369.0	1273.0	1071.6	923.0	871.9
150°	1242.1	1323.3	1242.1	1073.4	940.2	895.3
152.5°	1216.8	1283.8	1216.8	1074.3	958.2	918.6
155°	1186.4	1232.5	1186.4	1076.8	983.0	951.3
157.5°	1162.7	1195.9	1162.7	1079.2	1003.6	980.6
160°	1149.1	1175.3	1149.1	1080.1	1018.0	999.4
162.5°	1138.1	1157.4	1138.1	1080.1	1030.7	1015.6
165°	1122.9	1134.9	1122.9	1081.2	1048.5	1038.6
167.5°	1111.2	1117.7	1111.2	1082.5	1063.0	1058.1
170°	1104.8	1107.0	1104.8	1083.5	1071.1	1068.9
172.5°	1100.3	1100.7	1100.3	1086.2	1078.2	1077.0
175°	1094.7	1092.4	1094.7	1086.8	1085.7	1085.7
177.5°	1093.6	1090.1	1093.6	1088.4	1089.3	1090.1
180°	1090.1	1090.1	1090.1	1090.1	1090.1	1090.1



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	12.12	12.81	13.18	13.87	15.30	10.97	11.67	12.04	12.73	14.16
	3H	12.81	13.43	13.89	14.50	15.95	17.12	17.74	18.19	18.81	20.26
	4H	13.21	13.80	14.30	14.87	16.33	18.39	18.98	19.48	20.05	21.50
	6H	13.56	14.11	14.66	15.18	16.64	18.99	19.53	20.08	20.60	22.07
	8H	13.68	14.19	14.78	15.28	16.74	19.11	19.63	20.21	20.71	22.17
	12H	13.75	14.23	14.85	15.31	16.80	19.15	19.64	20.25	20.72	22.20
4H	2H	12.50	13.09	13.59	14.16	15.61	11.49	12.08	12.59	13.15	14.61
	3H	13.49	13.98	14.59	15.07	16.54	17.81	18.30	18.91	19.40	20.86
	4H	14.05	14.50	15.15	15.58	17.07	19.26	19.71	20.36	20.79	22.28
	6H	14.52	14.90	15.63	16.01	17.49	19.99	20.37	21.10	21.48	22.97
	8H	14.69	15.05	15.79	16.15	17.64	20.16	20.52	21.26	21.61	23.11
	12H	14.79	15.12	15.92	16.23	17.73	20.21	20.54	21.34	21.65	23.15
8H	4H	15.14	15.50	16.25	16.60	18.10	19.37	19.73	20.48	20.83	22.33
	6H	15.74	16.04	16.87	17.18	18.68	20.25	20.55	21.38	21.69	23.18
	8H	15.98	16.24	17.12	17.36	18.88	20.50	20.76	21.64	21.88	23.40
	12H	16.15	16.37	17.28	17.49	19.04	20.62	20.84	21.75	21.96	23.51
12H	4H	15.28	15.60	16.40	16.72	18.22	19.33	19.65	20.45	20.77	22.27
	6H	16.02	16.28	17.16	17.40	18.92	20.26	20.52	21.40	21.64	23.16
	8H	16.31	16.54	17.45	17.66	19.21	20.53	20.76	21.67	21.88	23.43