

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: P855249

Luminaire Tested: SQ2-FA-125U-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855249  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-125U-100D-835-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

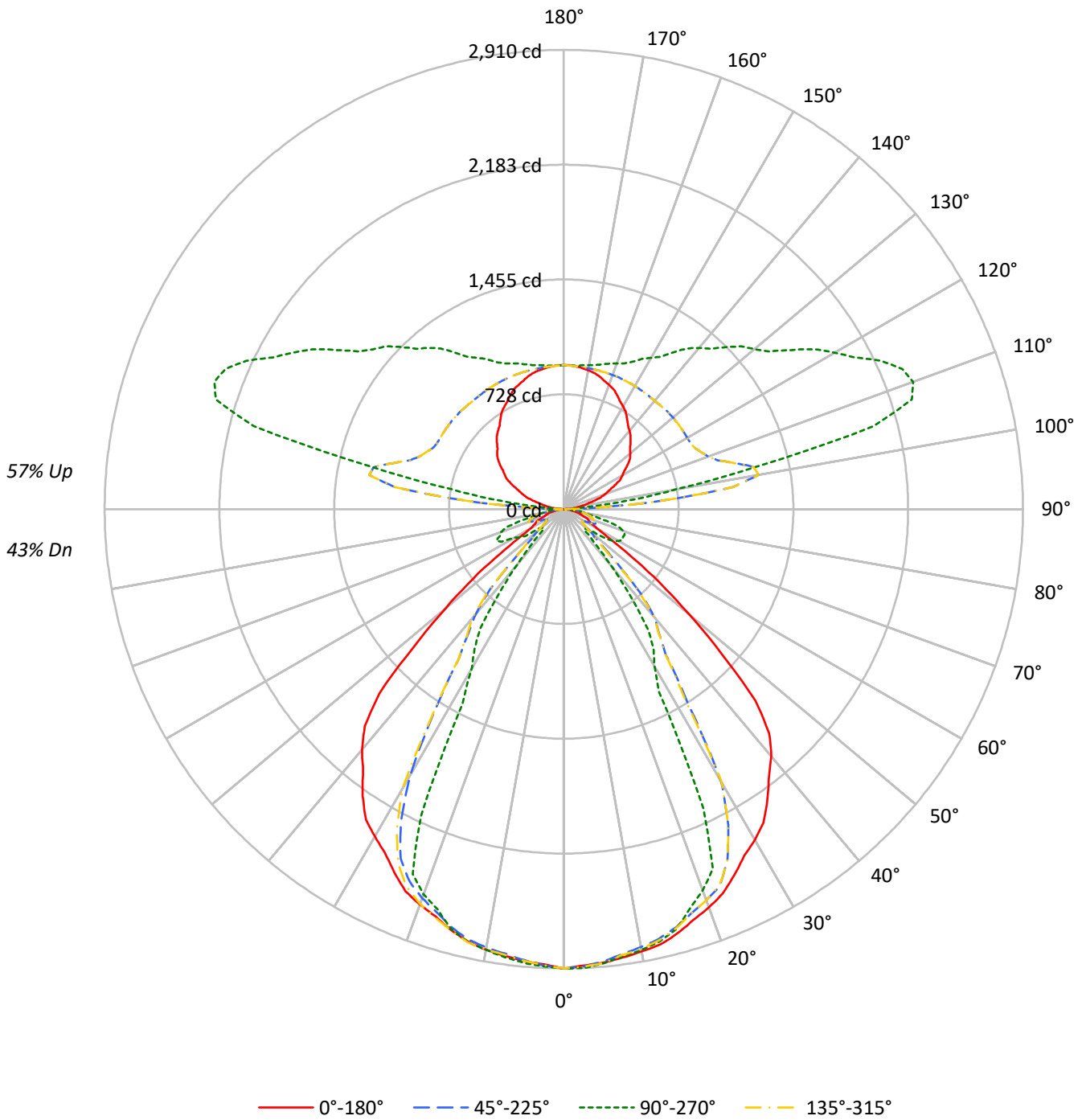
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9876.0 lumens  
Efficiency: N/A  
Efficacy: 121.2 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: General Diffuse  
  
Input Watts (W): 81.5  
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	50	30	10	0	
RCR																						
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43				
1	97	93	90	87	89	85	82	80	71	69	67	58	56	55	45	44	44	38				
2	89	83	77	72	82	76	71	67	63	60	57	52	50	48	41	40	39	34				
3	82	74	67	62	75	68	62	58	57	53	50	47	44	42	38	36	34	30				
4	76	66	59	54	70	61	55	50	52	47	44	43	40	37	35	33	31	27				
5	70	60	52	47	64	55	49	44	47	42	39	39	36	33	32	30	28	25				
6	65	54	47	41	60	50	44	39	43	38	34	36	33	30	30	27	25	22				
7	61	49	42	37	56	46	40	35	39	35	31	33	30	27	28	25	23	20				
8	57	45	38	33	52	42	36	31	36	31	28	31	27	25	26	23	21	19				
9	53	42	35	30	49	39	33	29	34	29	25	29	25	23	24	21	20	17				
10	50	38	32	27	46	36	30	26	31	27	23	27	23	21	23	20	18	16				

**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	2.8
10°-20°	777.0	7.9
20°-30°	1059.5	10.7
30°-40°	890.3	9.0
40°-50°	505.7	5.1
50°-60°	268.3	2.7
60°-70°	247.0	2.5
70°-80°	181.4	1.8
80°-90°	48.4	0.5
90°-100°	348.7	3.5
100°-110°	1135.3	11.5
110°-120°	1123.0	11.4
120°-130°	917.7	9.3
130°-140°	750.1	7.6
140°-150°	584.2	5.9
150°-160°	421.1	4.3
160°-170°	257.4	2.6
170°-180°	86.9	0.9
0°-30°	2110.4	21.4
0°-40°	3000.7	30.4
0°-60°	3774.7	38.2
0°-90°	4251.5	43.0
90°-120°	2607.1	26.4
90°-150°	4859.1	49.2
90°-180°	5625.0	57.0
0°-180°	9876.0	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°	0	7	0	7	0	3
95°	47	140	47	140	47	55
105°	193	2034	193	2034	193	206
115°	357	2221	357	2221	357	353
125°	496	1757	496	1757	496	441
135°	599	1451	599	1451	599	463
145°	700	1213	700	1213	700	438
155°	798	1029	798	1029	798	368
165°	871	950	871	950	871	245
175°	908	913	908	913	908	86
180°	912	912	912	912	912	



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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°	8.8	16.3	8.6	8.4	8.4	8.4	8.6	16.3	8.8	14.6	10.3
90°	0.0	3.3	7.8	6.7	6.7	6.7	7.8	3.3	0.0	3.3	7.8
92.5°	16.2	58.1	185.5	61.1	47.1	61.1	185.5	58.1	16.2	58.1	185.5
95°	47.1	143.6	639.2	227.9	140.2	227.9	639.2	143.6	47.1	143.6	639.2
97.5°	88.6	186.8	1084.7	660.7	403.2	660.7	1084.7	186.8	88.6	186.8	1084.7
100°	115.5	212.0	1252.5	1116.8	724.4	1116.8	1252.5	212.0	115.5	212.0	1252.5
102.5°	146.0	239.0	1231.8	1652.3	1256.3	1652.3	1231.8	239.0	146.0	239.0	1231.8
105°	192.8	278.4	1124.6	2148.1	2034.1	2148.1	1124.6	278.4	192.8	278.4	1124.6
107.5°	243.5	324.0	1022.9	2191.1	2311.9	2191.1	1022.9	324.0	243.5	324.0	1022.9
110°	280.3	353.8	974.4	2137.7	2355.9	2137.7	974.4	353.8	280.3	353.8	974.4



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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°	310.9	383.4	943.9	2041.3	2322.6	2041.3	943.9	383.4	310.9	383.4	943.9
115°	356.6	425.6	916.1	1888.0	2221.3	1888.0	916.1	425.6	356.6	425.6	916.1
117.5°	403.7	465.9	905.3	1747.6	2079.3	1747.6	905.3	465.9	403.7	465.9	905.3
120°	430.6	491.9	902.6	1661.3	1982.4	1661.3	902.6	491.9	430.6	491.9	902.6
122.5°	456.6	517.2	903.5	1586.3	1885.6	1586.3	903.5	517.2	456.6	517.2	903.5
125°	495.7	552.6	903.7	1490.6	1757.1	1490.6	903.7	552.6	495.7	552.6	903.7
127.5°	529.1	587.3	903.5	1419.0	1641.1	1419.0	903.5	587.3	529.1	587.3	903.5
130°	550.6	609.7	902.6	1378.1	1576.5	1378.1	902.6	609.7	550.6	609.7	902.6
132.5°	569.5	631.2	901.7	1340.1	1526.3	1340.1	901.7	631.2	569.5	631.2	901.7
135°	598.8	661.2	899.3	1286.5	1451.0	1286.5	899.3	661.2	598.8	661.2	899.3
137.5°	627.5	690.4	896.8	1232.0	1378.1	1232.0	896.8	690.4	627.5	690.4	896.8
140°	648.1	708.4	895.9	1195.0	1333.2	1195.0	895.9	708.4	648.1	708.4	895.9
142.5°	667.8	725.5	895.9	1159.7	1283.0	1159.7	895.9	725.5	667.8	725.5	895.9
145°	699.7	751.2	897.1	1108.0	1213.3	1108.0	897.1	751.2	699.7	751.2	897.1
147.5°	730.6	775.4	898.7	1064.0	1145.4	1064.0	898.7	775.4	730.6	775.4	898.7
150°	751.3	790.7	900.5	1037.6	1106.8	1037.6	900.5	790.7	751.3	790.7	900.5
152.5°	771.9	804.4	901.3	1017.6	1072.6	1017.6	901.3	804.4	771.9	804.4	901.3
155°	798.4	824.6	902.6	992.1	1029.4	992.1	902.6	824.6	798.4	824.6	902.6
157.5°	823.5	842.3	904.0	973.2	999.3	973.2	904.0	842.3	823.5	842.3	904.0
160°	838.8	854.1	904.9	961.5	982.3	961.5	904.9	854.1	838.8	854.1	904.9
162.5°	852.1	864.0	904.9	951.4	967.0	951.4	904.9	864.0	852.1	864.0	904.9
165°	871.3	879.0	904.9	938.8	949.7	938.8	904.9	879.0	871.3	879.0	904.9
167.5°	884.7	889.5	905.1	929.2	935.0	929.2	905.1	889.5	884.7	889.5	905.1
170°	893.7	895.8	906.0	922.9	925.0	922.9	906.0	895.8	893.7	895.8	906.0
172.5°	900.0	901.3	907.8	919.3	918.8	919.3	907.8	901.3	900.0	901.3	907.8
175°	908.3	908.3	908.3	915.0	912.7	915.0	908.3	908.3	908.3	908.3	908.3
177.5°	911.7	910.8	909.9	914.3	910.8	914.3	909.9	910.8	911.7	910.8	909.9
180°	911.7	911.7	911.7	911.7	911.7	911.7	911.7	911.7	911.7	911.7	911.7



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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°	10.1	10.1	8.4	10.3	12.9	8.8
90°	6.7	6.7	6.7	7.8	3.3	0.0
92.5°	61.1	47.1	61.1	185.5	58.1	16.2
95°	227.9	140.2	227.9	639.2	143.6	47.1
97.5°	660.7	403.2	660.7	1084.7	186.8	88.6
100°	1116.8	724.4	1116.8	1252.5	212.0	115.5
102.5°	1652.3	1256.3	1652.3	1231.8	239.0	146.0
105°	2148.1	2034.1	2148.1	1124.6	278.4	192.8
107.5°	2191.1	2311.9	2191.1	1022.9	324.0	243.5
110°	2137.7	2355.9	2137.7	974.4	353.8	280.3





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CATALOG NUMBER: SQ2-FA-125U-100D-835-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2041.3	2322.6	2041.3	943.9	383.4	310.9
115°	1888.0	2221.3	1888.0	916.1	425.6	356.6
117.5°	1747.6	2079.3	1747.6	905.3	465.9	403.7
120°	1661.3	1982.4	1661.3	902.6	491.9	430.6
122.5°	1586.3	1885.6	1586.3	903.5	517.2	456.6
125°	1490.6	1757.1	1490.6	903.7	552.6	495.7
127.5°	1419.0	1641.1	1419.0	903.5	587.3	529.1
130°	1378.1	1576.5	1378.1	902.6	609.7	550.6
132.5°	1340.1	1526.3	1340.1	901.7	631.2	569.5
135°	1286.5	1451.0	1286.5	899.3	661.2	598.8
137.5°	1232.0	1378.1	1232.0	896.8	690.4	627.5
140°	1195.0	1333.2	1195.0	895.9	708.4	648.1
142.5°	1159.7	1283.0	1159.7	895.9	725.5	667.8
145°	1108.0	1213.3	1108.0	897.1	751.2	699.7
147.5°	1064.0	1145.4	1064.0	898.7	775.4	730.6
150°	1037.6	1106.8	1037.6	900.5	790.7	751.3
152.5°	1017.6	1072.6	1017.6	901.3	804.4	771.9
155°	992.1	1029.4	992.1	902.6	824.6	798.4
157.5°	973.2	999.3	973.2	904.0	842.3	823.5
160°	961.5	982.3	961.5	904.9	854.1	838.8
162.5°	951.4	967.0	951.4	904.9	864.0	852.1
165°	938.8	949.7	938.8	904.9	879.0	871.3
167.5°	929.2	935.0	929.2	905.1	889.5	884.7
170°	922.9	925.0	922.9	906.0	895.8	893.7
172.5°	919.3	918.8	919.3	907.8	901.3	900.0
175°	915.0	912.7	915.0	908.3	908.3	908.3
177.5°	914.3	910.8	914.3	909.9	910.8	911.7
180°	911.7	911.7	911.7	911.7	911.7	911.7

TEST NUMBER: P855249

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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	12.59	13.31	13.63	14.34	15.71	11.45	12.17	12.49	13.20	14.57
	3H	13.29	13.93	14.33	14.97	16.36	17.60	18.24	18.64	19.27	20.67
	4H	13.69	14.30	14.75	15.34	16.74	18.87	19.48	19.92	20.51	21.92
	6H	14.04	14.60	15.11	15.65	17.06	19.47	20.03	20.53	21.07	22.49
	8H	14.16	14.69	15.23	15.75	17.16	19.59	20.12	20.66	21.18	22.59
	12H	14.23	14.73	15.30	15.78	17.21	19.63	20.13	20.70	21.18	22.62
4H	2H	12.98	13.59	14.04	14.63	16.03	11.97	12.58	13.04	13.62	15.02
	3H	13.97	14.48	15.04	15.54	16.96	18.29	18.80	19.36	19.86	21.28
	4H	14.53	14.99	15.60	16.05	17.49	19.74	20.20	20.81	21.26	22.70
	6H	15.00	15.40	16.08	16.48	17.91	20.47	20.87	21.55	21.95	23.38
	8H	15.17	15.54	16.25	16.61	18.06	20.64	21.01	21.72	22.08	23.53
	12H	15.28	15.61	16.37	16.70	18.15	20.69	21.03	21.79	22.12	23.56
8H	4H	15.62	15.99	16.70	17.07	18.51	19.86	20.23	20.94	21.30	22.75
	6H	16.23	16.53	17.33	17.65	19.09	20.73	21.04	21.83	22.15	23.60
	8H	16.46	16.73	17.57	17.83	19.29	20.98	21.25	22.09	22.35	23.81
	12H	16.63	16.86	17.74	17.96	19.46	21.10	21.33	22.21	22.43	23.93
12H	4H	15.76	16.10	16.86	17.18	18.63	19.81	20.15	20.91	21.23	22.68
	6H	16.50	16.77	17.61	17.87	19.33	20.74	21.01	21.85	22.11	23.57
	8H	16.80	17.03	17.91	18.12	19.63	21.02	21.25	22.13	22.34	23.85