

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: P855037

Luminaire Tested: SQ2-FA-100U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855037  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-100U-100D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

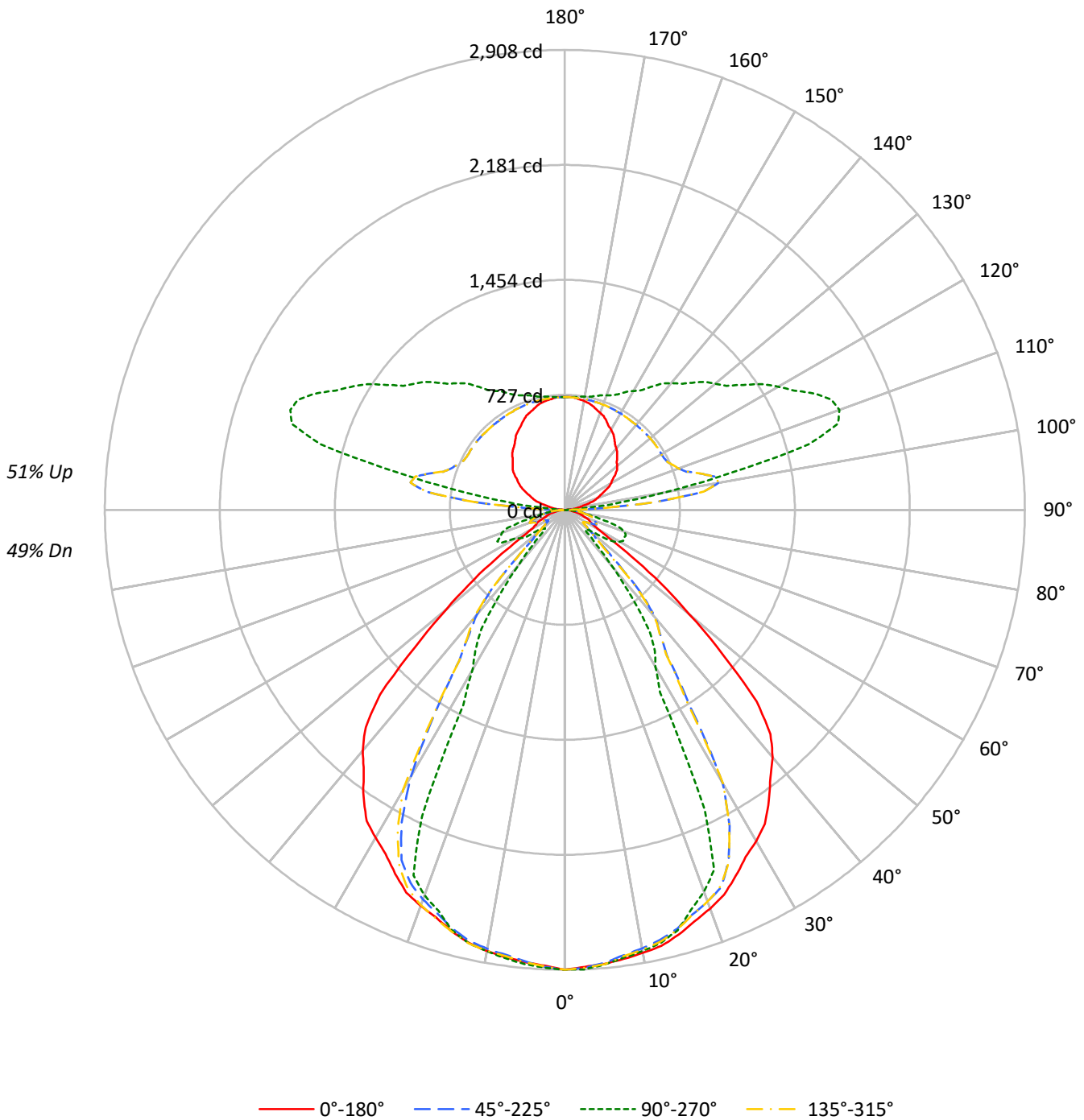
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8688.6 lumens  
Efficiency: N/A  
Efficacy: 123.8 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): 70.2  
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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	99	95	91	88	91	87	84	82	74	72	70	62	60	59	50	49	49	43
2	91	84	79	74	84	78	73	69	66	63	60	56	53	51	46	44	43	38
3	84	75	69	63	77	70	64	60	60	56	52	51	48	45	42	40	38	34
4	77	68	60	55	71	63	57	52	54	50	46	46	43	40	39	36	34	31
5	72	61	54	48	66	57	51	46	49	44	41	42	39	36	36	33	31	28
6	67	56	48	43	62	52	45	41	45	40	36	39	35	32	33	30	28	25
7	62	51	43	38	57	48	41	37	42	37	33	36	32	29	31	28	26	23
8	58	47	39	35	54	44	37	33	38	33	30	33	30	27	29	26	24	21
9	54	43	36	31	50	40	34	30	36	31	27	31	27	25	27	24	22	20
10	51	40	33	29	47	38	31	27	33	28	25	29	25	23	25	22	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	46950	46950	46950	46950
5°	46704	46775	46525	46738
10°	46630	46452	46452	46452
15°	46481	46004	46114	46004
20°	46118	44161	45782	44575
25°	45514	37269	45202	38051
30°	45095	21382	44607	21669
35°	44305	18370	43741	18112
40°	43079	9662	41876	9569
45°	39155	4156	37755	4156
50°	25834	5014	24513	4682
55°	14446	9258	13706	8397
60°	7792	13030	7650	11683
65°	6869	15836	7205	18013
70°	6420	18944	6104	19978
75°	6014	16282	6157	16831
80°	5095	11623	5095	12236
85°	4465	6484	4057	7725

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 39155 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.6	3.1
10°-20°	776.3	8.9
20°-30°	1058.5	12.2
30°-40°	889.5	10.2
40°-50°	505.2	5.8
50°-60°	268.1	3.1
60°-70°	246.8	2.8
70°-80°	181.2	2.1
80°-90°	48.6	0.6
90°-100°	298.0	3.4
100°-110°	901.3	10.4
110°-120°	879.8	10.1
120°-130°	718.9	8.3
130°-140°	586.9	6.8
140°-150°	456.8	5.3
150°-160°	329.3	3.8
160°-170°	201.6	2.3
170°-180°	68.1	0.8
0°-30°	2108.5	24.3
0°-40°	2998.0	34.5
0°-60°	3771.3	43.4
0°-90°	4247.9	48.9
90°-120°	2079.1	23.9
90°-150°	3841.7	44.2
90°-180°	4441.0	51.1
0°-180°	8688.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2908	2908	2908	2908	2908	
5°	2882	2886	2871	2884	2882	274
15°	2781	2752	2759	2752	2781	784
25°	2555	2092	2537	2136	2555	1178
35°	2248	932	2219	919	2248	1403
45°	1715	182	1654	182	1715	1254
55°	513	329	487	298	513	494
65°	180	414	189	472	180	181
75°	96	261	99	270	96	99
85°	24	35	22	42	24	27
90°	0	7	0	7	0	3
95°	37	131	37	131	37	44
105°	157	1597	157	1597	157	165
115°	279	1740	279	1740	279	276
125°	390	1377	390	1377	390	346
135°	467	1135	467	1135	467	362
145°	546	949	546	949	546	342
155°	622	808	622	808	622	286
165°	680	745	680	745	680	192
175°	711	716	711	716	711	67
180°	714	714	714	714	714	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9
2.5°	2892.1	2934.9	2897.4	2892.4	2907.9	2904.4	2899.1	2919.3	2885.1	2919.3	2892.1
5°	2881.6	2930.9	2875.0	2860.2	2886.0	2868.8	2883.7	2913.4	2870.6	2909.1	2866.2
7.5°	2863.6	2907.3	2840.3	2830.8	2856.1	2841.1	2847.3	2888.6	2852.6	2877.9	2839.0
10°	2844.2	2882.8	2815.8	2809.8	2833.3	2818.2	2824.6	2867.6	2833.3	2856.9	2817.9
12.5°	2823.2	2853.2	2785.9	2783.3	2803.4	2793.6	2796.4	2832.7	2805.2	2828.9	2791.7
15°	2780.7	2808.5	2741.2	2730.7	2752.2	2743.6	2747.8	2780.1	2758.8	2773.7	2741.2
17.5°	2728.0	2750.3	2683.2	2651.7	2652.6	2663.3	2683.2	2722.4	2703.0	2722.8	2676.7
20°	2684.1	2709.9	2636.0	2574.5	2570.2	2580.9	2636.0	2675.2	2664.5	2685.8	2620.6
22.5°	2633.3	2650.5	2583.3	2479.5	2464.9	2475.7	2576.3	2622.6	2618.8	2633.4	2552.2
25°	2554.8	2572.0	2449.5	2300.1	2092.0	2287.2	2453.9	2537.3	2537.3	2550.2	2443.0
27.5°	2475.0	2475.4	2253.9	1477.2	1303.1	1423.9	2250.9	2431.6	2452.1	2445.7	2235.1
30°	2418.8	2403.9	1997.7	1194.1	1146.9	1176.9	2000.0	2358.2	2392.6	2368.9	1947.3
32.5°	2353.9	2311.5	1475.0	1097.7	1059.2	1085.8	1426.3	2271.1	2331.2	2280.1	1531.6
35°	2247.8	2136.2	1125.0	970.7	932.0	966.4	1116.2	2099.2	2219.2	2082.1	1162.3
37.5°	2133.3	1698.0	990.3	773.1	689.9	756.4	985.5	1679.8	2086.8	1640.8	989.4
40°	2043.9	1334.0	890.4	565.5	458.4	533.3	883.7	1272.8	1986.8	1369.3	868.4
42.5°	1924.6	1171.9	714.9	359.2	281.2	328.8	685.5	1144.9	1864.0	1186.4	691.3
45°	1714.8	1007.3	423.2	197.1	182.0	190.6	390.3	988.7	1653.5	967.4	432.0
47.5°	1358.4	768.3	271.9	167.4	183.7	167.4	263.6	743.9	1282.8	742.5	271.5
50°	1028.5	599.7	210.5	169.5	199.6	169.5	204.0	579.2	975.9	632.8	208.4
52.5°	761.8	501.1	172.0	185.9	239.9	189.3	167.1	487.8	723.3	510.5	162.7
55°	513.2	393.1	138.2	245.3	328.9	251.8	138.2	381.8	486.9	377.5	133.8
57.5°	325.4	292.4	139.9	315.4	375.5	321.4	142.1	281.9	312.3	283.1	122.8
60°	241.3	230.5	155.7	334.9	403.5	339.2	157.8	221.8	236.9	219.7	131.6
62.5°	199.1	181.6	187.2	362.7	419.2	353.2	191.2	173.1	207.0	165.9	145.6
65°	179.8	117.6	221.5	367.3	414.5	367.3	223.6	111.4	188.6	120.0	197.4
67.5°	162.2	87.3	214.0	364.7	417.1	365.6	208.7	83.2	155.7	81.1	201.7
70°	136.0	78.0	201.7	371.3	401.3	358.4	201.7	75.8	129.3	73.6	236.9
72.5°	113.2	74.2	187.7	342.8	355.7	329.9	189.5	73.7	113.6	66.4	222.8
75°	96.4	72.9	179.8	273.8	261.0	261.0	175.5	70.8	98.7	66.5	173.2
77.5°	72.4	64.7	149.1	178.8	168.8	168.8	146.5	62.4	68.9	58.6	140.8
80°	54.8	59.1	122.8	131.4	125.0	125.0	118.4	57.0	54.8	54.8	116.2
82.5°	42.5	50.3	94.7	96.3	91.7	90.0	92.1	49.9	42.5	46.0	89.9
85°	24.1	34.8	50.4	41.5	35.0	32.9	48.3	32.7	21.9	32.7	48.3
87.5°	8.8	16.1	9.7	8.6	8.4	8.6	9.7	16.1	8.8	14.4	11.4
90°	0.0	2.1	13.5	7.8	6.7	7.8	13.5	2.1	0.0	2.1	13.5
92.5°	12.6	50.7	181.9	60.4	43.4	60.4	181.9	50.7	12.6	50.7	181.9
95°	37.0	116.9	562.3	207.7	131.0	207.7	562.3	116.9	37.0	116.9	562.3
97.5°	71.5	148.8	886.2	586.5	357.1	586.5	886.2	148.8	71.5	148.8	886.2
100°	92.9	168.6	990.2	957.3	643.0	957.3	990.2	168.6	92.9	168.6	990.2
102.5°	117.1	190.1	968.7	1342.6	1070.4	1342.6	968.7	190.1	117.1	190.1	968.7
105°	156.8	220.4	885.0	1680.6	1597.3	1680.6	885.0	220.4	156.8	220.4	885.0
107.5°	194.5	255.1	804.2	1713.9	1810.4	1713.9	804.2	255.1	194.5	255.1	804.2
110°	219.6	277.6	764.0	1671.9	1847.1	1671.9	764.0	277.6	219.6	277.6	764.0



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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°	243.8	300.1	739.8	1601.2	1822.9	1601.2	739.8	300.1	243.8	300.1	739.8
115°	278.9	332.5	715.8	1481.0	1739.6	1481.0	715.8	332.5	278.9	332.5	715.8
117.5°	313.9	364.6	707.2	1368.5	1633.1	1368.5	707.2	364.6	313.9	364.6	707.2
120°	337.2	385.3	704.5	1302.8	1557.0	1302.8	704.5	385.3	337.2	385.3	704.5
122.5°	358.6	404.2	704.5	1245.1	1479.9	1245.1	704.5	404.2	358.6	404.2	704.5
125°	389.8	432.5	705.6	1169.7	1376.7	1169.7	705.6	432.5	389.8	432.5	705.6
127.5°	415.2	459.4	704.5	1112.7	1289.3	1112.7	704.5	459.4	415.2	459.4	704.5
130°	431.2	477.2	704.5	1080.1	1240.0	1080.1	704.5	477.2	431.2	477.2	704.5
132.5°	445.6	492.5	703.7	1050.3	1197.9	1050.3	703.7	492.5	445.6	492.5	703.7
135°	467.1	516.4	701.2	1008.8	1134.7	1008.8	701.2	516.4	467.1	516.4	701.2
137.5°	491.0	538.0	701.2	964.4	1081.1	964.4	701.2	538.0	491.0	538.0	701.2
140°	506.3	552.3	701.2	935.6	1046.2	935.6	701.2	552.3	506.3	552.3	701.2
142.5°	521.6	565.8	700.3	909.3	1005.8	909.3	700.3	565.8	521.6	565.8	700.3
145°	545.5	586.0	701.2	867.7	948.7	867.7	701.2	586.0	545.5	586.0	701.2
147.5°	569.5	603.9	702.6	833.4	895.7	833.4	702.6	603.9	569.5	603.9	702.6
150°	584.7	616.4	703.5	814.4	867.0	814.4	703.5	616.4	584.7	616.4	703.5
152.5°	599.0	627.3	704.3	798.0	841.0	798.0	704.3	627.3	599.0	627.3	704.3
155°	621.6	642.4	705.6	778.0	807.6	778.0	705.6	642.4	621.6	642.4	705.6
157.5°	641.4	658.3	707.0	763.3	783.9	763.3	707.0	658.3	641.4	658.3	707.0
160°	653.1	667.3	707.9	754.1	769.5	754.1	707.9	667.3	653.1	667.3	707.9
162.5°	664.7	675.4	708.8	746.1	758.8	746.1	708.8	675.4	664.7	675.4	708.8
165°	680.0	687.5	709.0	736.2	744.9	736.2	709.0	687.5	680.0	687.5	709.0
167.5°	692.9	696.8	710.4	728.4	732.1	728.4	710.4	696.8	692.9	696.8	710.4
170°	700.1	702.2	711.3	724.7	725.9	724.7	711.3	702.2	700.1	702.2	711.3
172.5°	704.5	705.9	711.3	721.1	721.4	721.1	711.3	705.9	704.5	705.9	711.3
175°	711.3	711.3	712.4	718.0	715.8	718.0	712.4	711.3	711.3	711.3	712.4
177.5°	714.5	713.5	712.6	715.2	713.5	715.2	712.6	713.5	714.5	713.5	712.6
180°	713.5	713.5	713.5	713.5	713.5	713.5	713.5	713.5	713.5	713.5	713.5



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2907.9	2907.9	2907.9	2907.9	2907.9	2907.9
2.5°	2885.3	2897.4	2897.4	2890.3	2924.6	2892.1
5°	2855.9	2883.7	2870.8	2870.6	2913.7	2881.6
7.5°	2835.2	2861.3	2849.3	2846.8	2889.2	2863.6
10°	2813.9	2833.3	2824.7	2831.1	2870.0	2844.2
12.5°	2784.2	2806.9	2798.5	2808.3	2843.8	2823.2
15°	2732.9	2752.2	2756.4	2760.9	2802.1	2780.7
17.5°	2648.0	2657.5	2678.8	2709.1	2752.1	2728.0
20°	2581.4	2594.3	2607.1	2660.1	2709.9	2684.1
22.5°	2505.6	2501.3	2531.3	2593.4	2655.7	2633.3
25°	2301.1	2135.9	2318.2	2478.0	2561.2	2554.8
27.5°	1602.2	1390.4	1577.7	2287.3	2462.1	2475.0
30°	1260.9	1162.3	1258.7	2041.6	2388.8	2418.8
32.5°	1119.4	1051.7	1110.5	1554.0	2296.4	2353.9
35°	966.0	918.9	966.0	1162.3	2114.9	2247.8
37.5°	773.2	676.7	771.6	1004.4	1709.6	2133.3
40°	576.2	454.0	559.0	899.1	1366.3	2043.9
42.5°	383.9	292.5	363.3	707.9	1181.7	1924.6
45°	207.7	182.0	199.2	427.6	964.4	1714.8
47.5°	162.9	172.3	162.9	269.8	737.7	1358.4
50°	156.4	186.4	156.4	208.4	610.3	1028.5
52.5°	170.5	202.2	168.7	164.5	498.0	761.8
55°	193.2	298.3	195.4	133.8	365.2	513.2
57.5°	275.1	335.6	278.0	126.7	281.3	325.4
60°	282.5	361.8	280.4	133.8	217.6	241.3
62.5°	334.1	447.8	333.8	153.1	161.8	199.1
65°	428.6	471.5	432.9	195.1	115.6	179.8
67.5°	406.8	437.2	402.5	209.2	79.5	162.2
70°	399.7	423.2	395.4	239.0	73.8	136.0
72.5°	372.9	375.8	365.2	221.5	66.4	113.2
75°	289.0	269.8	278.4	190.7	66.5	96.4
77.5°	179.7	172.0	173.2	145.6	58.7	72.4
80°	135.9	131.6	129.5	122.8	54.8	54.8
82.5°	100.7	96.4	94.3	94.7	46.0	42.5
85°	45.9	41.7	39.6	54.8	32.7	24.1
87.5°	10.3	10.1	8.6	11.4	12.7	8.8
90°	7.8	6.7	7.8	13.5	2.1	0.0
92.5°	60.4	43.4	60.4	181.9	50.7	12.6
95°	207.7	131.0	207.7	562.3	116.9	37.0
97.5°	586.5	357.1	586.5	886.2	148.8	71.5
100°	957.3	643.0	957.3	990.2	168.6	92.9
102.5°	1342.6	1070.4	1342.6	968.7	190.1	117.1
105°	1680.6	1597.3	1680.6	885.0	220.4	156.8
107.5°	1713.9	1810.4	1713.9	804.2	255.1	194.5
110°	1671.9	1847.1	1671.9	764.0	277.6	219.6





TEST NUMBER: P855037

CATALOG NUMBER: SQ2-FA-100U-100D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1601.2	1822.9	1601.2	739.8	300.1	243.8
115°	1481.0	1739.6	1481.0	715.8	332.5	278.9
117.5°	1368.5	1633.1	1368.5	707.2	364.6	313.9
120°	1302.8	1557.0	1302.8	704.5	385.3	337.2
122.5°	1245.1	1479.9	1245.1	704.5	404.2	358.6
125°	1169.7	1376.7	1169.7	705.6	432.5	389.8
127.5°	1112.7	1289.3	1112.7	704.5	459.4	415.2
130°	1080.1	1240.0	1080.1	704.5	477.2	431.2
132.5°	1050.3	1197.9	1050.3	703.7	492.5	445.6
135°	1008.8	1134.7	1008.8	701.2	516.4	467.1
137.5°	964.4	1081.1	964.4	701.2	538.0	491.0
140°	935.6	1046.2	935.6	701.2	552.3	506.3
142.5°	909.3	1005.8	909.3	700.3	565.8	521.6
145°	867.7	948.7	867.7	701.2	586.0	545.5
147.5°	833.4	895.7	833.4	702.6	603.9	569.5
150°	814.4	867.0	814.4	703.5	616.4	584.7
152.5°	798.0	841.0	798.0	704.3	627.3	599.0
155°	778.0	807.6	778.0	705.6	642.4	621.6
157.5°	763.3	783.9	763.3	707.0	658.3	641.4
160°	754.1	769.5	754.1	707.9	667.3	653.1
162.5°	746.1	758.8	746.1	708.8	675.4	664.7
165°	736.2	744.9	736.2	709.0	687.5	680.0
167.5°	728.4	732.1	728.4	710.4	696.8	692.9
170°	724.7	725.9	724.7	711.3	702.2	700.1
172.5°	721.1	721.4	721.1	711.3	705.9	704.5
175°	718.0	715.8	718.0	712.4	711.3	711.3
177.5°	715.2	713.5	715.2	712.6	713.5	714.5
180°	713.5	713.5	713.5	713.5	713.5	713.5



TEST NUMBER: P855037

CATALOG NUMBER: SQ2-FA-100U-100D-830-UNV-STD-W-4

**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	13.18	13.94	14.17	14.92	16.22	12.04	12.79	13.03	13.78	15.07
	3H	13.88	14.55	14.88	15.55	16.86	18.19	18.86	19.19	19.86	21.17
	4H	14.28	14.92	15.30	15.92	17.25	19.46	20.10	20.47	21.09	22.42
	6H	14.64	15.22	15.66	16.23	17.56	20.06	20.65	21.08	21.65	22.99
	8H	14.75	15.31	15.78	16.33	17.66	20.19	20.74	21.21	21.76	23.09
	12H	14.82	15.35	15.85	16.36	17.72	20.22	20.75	21.25	21.76	23.12
4H	2H	13.57	14.21	14.59	15.21	16.53	12.56	13.20	13.58	14.20	15.53
	3H	14.56	15.09	15.59	16.12	17.46	18.88	19.42	19.91	20.44	21.78
	4H	15.12	15.61	16.15	16.63	17.99	20.33	20.82	21.36	21.84	23.20
	6H	15.59	16.01	16.63	17.05	18.41	21.07	21.48	22.11	22.53	23.88
	8H	15.76	16.15	16.80	17.19	18.56	21.23	21.62	22.27	22.66	24.03
	12H	15.88	16.23	16.93	17.28	18.65	21.29	21.64	22.35	22.69	24.07
8H	4H	16.22	16.61	17.26	17.64	19.01	20.45	20.84	21.49	21.88	23.25
	6H	16.82	17.14	17.89	18.22	19.59	21.33	21.65	22.39	22.73	24.10
	8H	17.06	17.34	18.13	18.40	19.79	21.58	21.86	22.65	22.92	24.31
	12H	17.23	17.47	18.30	18.53	19.96	21.70	21.94	22.77	23.00	24.43
12H	4H	16.36	16.71	17.42	17.76	19.14	20.41	20.76	21.47	21.81	23.19
	6H	17.10	17.38	18.17	18.44	19.83	21.34	21.62	22.41	22.68	24.07
	8H	17.39	17.64	18.47	18.70	20.13	21.62	21.86	22.69	22.92	24.35