

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: P855052

Luminaire Tested: SQ2-FA-025U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855052  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-025U-100D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

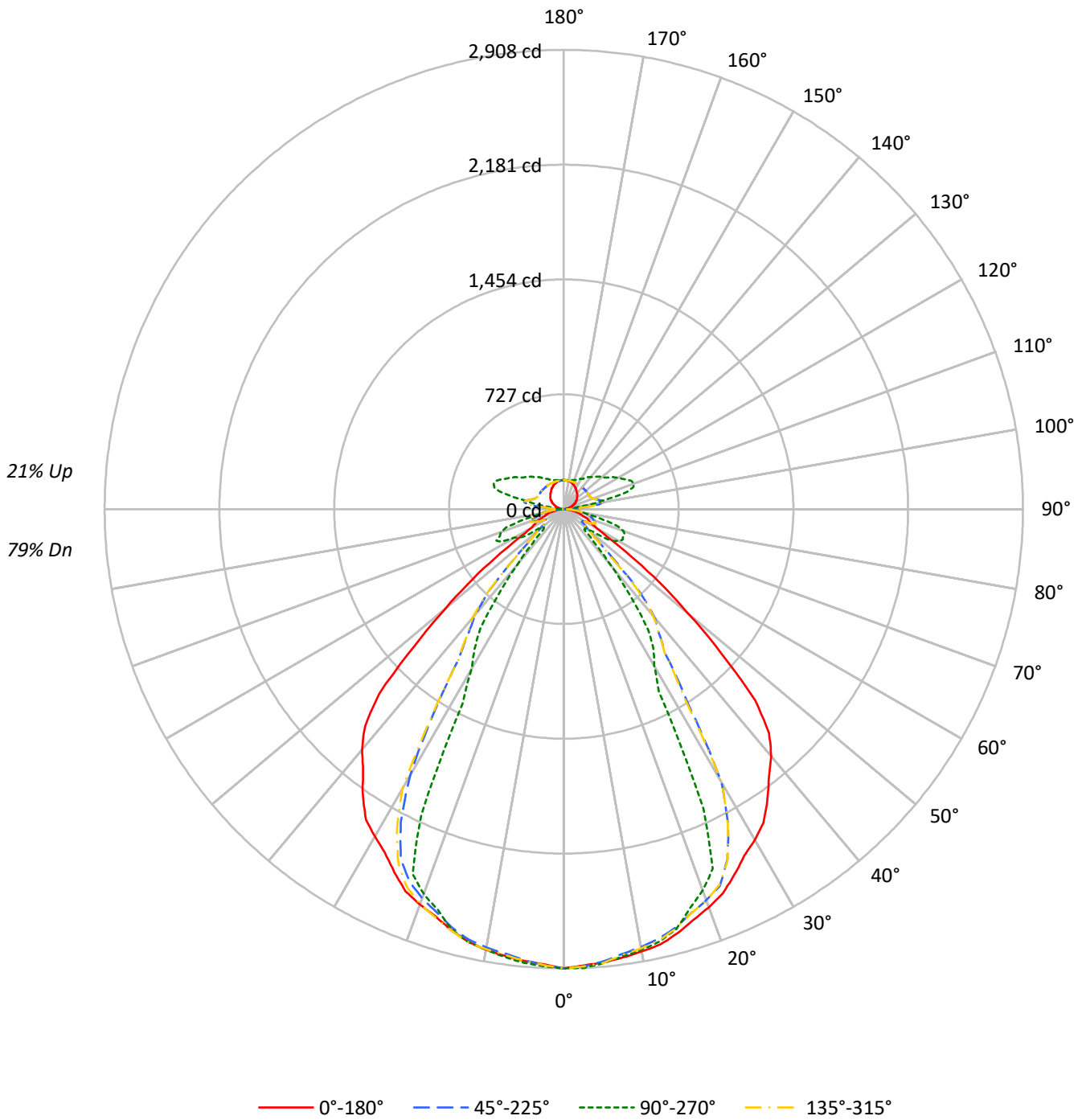
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5381.2 lumens  
Efficiency: N/A  
Efficacy: 119.6 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-Direct  
  
Input Watts (W): 45  
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





TEST NUMBER: P855052

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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
RCR																				
0	114	114	114	114	109	109	109	109	99	99	99	91	91	91	83	83	83	79		
1	106	102	99	95	101	98	95	92	90	87	85	82	81	79	76	74	73	70		
2	98	92	86	81	94	88	83	79	81	77	74	75	72	69	69	67	65	62		
3	91	83	76	71	87	80	74	69	74	69	65	68	65	61	63	60	58	55		
4	85	75	68	62	81	72	66	61	67	62	58	63	58	55	58	55	52	50		
5	79	69	61	56	76	66	59	54	62	56	52	58	53	50	54	50	47	45		
6	74	63	55	50	71	61	54	49	57	51	47	54	49	45	50	46	43	41		
7	69	58	51	45	66	56	49	45	53	47	43	50	45	41	47	43	40	38		
8	65	54	46	41	63	52	45	41	49	43	39	46	41	38	44	40	37	35		
9	61	50	43	38	59	48	42	37	46	40	36	43	38	35	41	37	34	32		
10	58	46	40	35	56	45	39	35	43	37	33	41	36	32	39	34	31	30		

**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	5.1
10°-20°	776.3	14.4
20°-30°	1058.5	19.7
30°-40°	889.5	16.5
40°-50°	505.2	9.4
50°-60°	268.1	5.0
60°-70°	246.8	4.6
70°-80°	181.2	3.4
80°-90°	47.8	0.9
90°-100°	74.0	1.4
100°-110°	230.0	4.3
110°-120°	225.0	4.2
120°-130°	183.7	3.4
130°-140°	150.3	2.8
140°-150°	117.3	2.2
150°-160°	84.6	1.6
160°-170°	51.8	1.0
170°-180°	17.4	0.3
0°-30°	2108.5	39.2
0°-40°	2998.0	55.7
0°-60°	3771.3	70.1
0°-90°	4247.1	78.9
90°-120°	529.0	9.8
90°-150°	980.3	18.2
90°-180°	1134.0	21.1
0°-180°	5381.2	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	3	0	3	0	2
95°	10	33	10	33	10	12
105°	40	413	40	413	40	43
115°	72	444	72	444	72	71
125°	100	350	100	350	100	89
135°	120	289	120	289	120	93
145°	140	242	140	242	140	88
155°	160	206	160	206	160	74
165°	176	190	176	190	176	49
175°	183	183	183	183	183	17
180°	183	183	183	183	183	



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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	15.8	7.7	7.7	7.7	7.7	7.7	15.8	8.8	14.1	9.5
90°	0.0	1.1	3.4	3.4	3.4	3.4	3.4	1.1	0.0	1.1	3.4
92.5°	3.6	12.6	42.9	14.0	11.4	14.0	42.9	12.6	3.6	12.6	42.9
95°	10.1	29.8	135.7	50.1	32.6	50.1	135.7	29.8	10.1	29.8	135.7
97.5°	18.4	38.8	224.7	139.9	88.1	139.9	224.7	38.8	18.4	38.8	224.7
100°	24.6	43.3	253.4	237.0	158.1	237.0	253.4	43.3	24.6	43.3	253.4
102.5°	31.0	48.7	248.0	338.4	265.7	338.4	248.0	48.7	31.0	48.7	248.0
105°	40.4	56.8	226.5	432.2	412.6	432.2	226.5	56.8	40.4	56.8	226.5
107.5°	49.7	65.1	205.8	439.5	461.2	439.5	205.8	65.1	49.7	65.1	205.8
110°	56.1	71.3	195.0	429.2	471.9	429.2	195.0	71.3	56.1	71.3	195.0



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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°	62.3	76.8	189.7	410.6	464.8	410.6	189.7	76.8	62.3	76.8	189.7
115°	71.8	84.9	183.8	379.2	443.9	379.2	183.8	84.9	71.8	84.9	183.8
117.5°	81.0	92.9	181.4	349.3	415.4	349.3	181.4	92.9	81.0	92.9	181.4
120°	86.3	98.4	180.5	332.2	395.7	332.2	180.5	98.4	86.3	98.4	180.5
122.5°	91.7	103.8	181.4	317.7	375.9	317.7	181.4	103.8	91.7	103.8	181.4
125°	99.7	110.7	181.6	298.3	349.7	298.3	181.6	110.7	99.7	110.7	181.6
127.5°	106.3	117.5	181.6	283.7	327.5	283.7	181.6	117.5	106.3	117.5	181.6
130°	109.9	121.9	181.6	275.5	315.0	275.5	181.6	121.9	109.9	121.9	181.6
132.5°	114.3	126.4	180.7	268.3	305.2	268.3	180.7	126.4	114.3	126.4	180.7
135°	120.0	133.1	180.5	257.4	289.2	257.4	180.5	133.1	120.0	133.1	180.5
137.5°	126.4	138.5	180.5	246.6	275.5	246.6	180.5	138.5	126.4	138.5	180.5
140°	130.0	142.1	180.5	239.4	265.7	239.4	180.5	142.1	130.0	142.1	180.5
142.5°	134.5	145.7	180.5	232.1	255.8	232.1	180.5	145.7	134.5	145.7	180.5
145°	140.1	151.1	180.5	222.4	242.2	222.4	180.5	151.1	140.1	151.1	180.5
147.5°	146.9	156.3	181.6	213.4	229.0	213.4	181.6	156.3	146.9	156.3	181.6
150°	151.3	159.0	181.6	208.8	220.8	208.8	181.6	159.0	151.3	159.0	181.6
152.5°	154.9	161.7	181.6	204.3	214.6	204.3	181.6	161.7	154.9	161.7	181.6
155°	160.3	165.8	181.6	199.7	206.2	199.7	181.6	165.8	160.3	165.8	181.6
157.5°	165.6	169.8	181.6	195.6	199.8	195.6	181.6	169.8	165.6	169.8	181.6
160°	169.3	172.5	181.6	192.9	196.2	192.9	181.6	172.5	169.3	172.5	181.6
162.5°	172.0	174.3	181.6	191.1	193.5	191.1	181.6	174.3	172.0	174.3	181.6
165°	176.0	177.1	182.7	188.4	190.5	188.4	182.7	177.1	176.0	177.1	182.7
167.5°	178.4	178.6	181.6	186.8	187.9	186.8	181.6	178.6	178.4	178.6	181.6
170°	179.3	180.5	181.6	185.0	186.1	185.0	181.6	180.5	179.3	180.5	181.6
172.5°	181.1	181.4	182.5	184.1	184.3	184.1	182.5	181.4	181.1	181.4	182.5
175°	182.7	182.7	182.7	183.8	182.7	183.8	182.7	182.7	182.7	182.7	182.7
177.5°	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7
180°	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7	182.7



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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°	9.5	9.5	7.7	9.5	12.4	8.8
90°	3.4	3.4	3.4	3.4	1.1	0.0
92.5°	14.0	11.4	14.0	42.9	12.6	3.6
95°	50.1	32.6	50.1	135.7	29.8	10.1
97.5°	139.9	88.1	139.9	224.7	38.8	18.4
100°	237.0	158.1	237.0	253.4	43.3	24.6
102.5°	338.4	265.7	338.4	248.0	48.7	31.0
105°	432.2	412.6	432.2	226.5	56.8	40.4
107.5°	439.5	461.2	439.5	205.8	65.1	49.7
110°	429.2	471.9	429.2	195.0	71.3	56.1





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	410.6	464.8	410.6	189.7	76.8	62.3
115°	379.2	443.9	379.2	183.8	84.9	71.8
117.5°	349.3	415.4	349.3	181.4	92.9	81.0
120°	332.2	395.7	332.2	180.5	98.4	86.3
122.5°	317.7	375.9	317.7	181.4	103.8	91.7
125°	298.3	349.7	298.3	181.6	110.7	99.7
127.5°	283.7	327.5	283.7	181.6	117.5	106.3
130°	275.5	315.0	275.5	181.6	121.9	109.9
132.5°	268.3	305.2	268.3	180.7	126.4	114.3
135°	257.4	289.2	257.4	180.5	133.1	120.0
137.5°	246.6	275.5	246.6	180.5	138.5	126.4
140°	239.4	265.7	239.4	180.5	142.1	130.0
142.5°	232.1	255.8	232.1	180.5	145.7	134.5
145°	222.4	242.2	222.4	180.5	151.1	140.1
147.5°	213.4	229.0	213.4	181.6	156.3	146.9
150°	208.8	220.8	208.8	181.6	159.0	151.3
152.5°	204.3	214.6	204.3	181.6	161.7	154.9
155°	199.7	206.2	199.7	181.6	165.8	160.3
157.5°	195.6	199.8	195.6	181.6	169.8	165.6
160°	192.9	196.2	192.9	181.6	172.5	169.3
162.5°	191.1	193.5	191.1	181.6	174.3	172.0
165°	188.4	190.5	188.4	182.7	177.1	176.0
167.5°	186.8	187.9	186.8	181.6	178.6	178.4
170°	185.0	186.1	185.0	181.6	180.5	179.3
172.5°	184.1	184.3	184.1	182.5	181.4	181.1
175°	183.8	182.7	183.8	182.7	182.7	182.7
177.5°	182.7	182.7	182.7	182.7	182.7	182.7
180°	182.7	182.7	182.7	182.7	182.7	182.7



TEST NUMBER: P855052

CATALOG NUMBER: SQ2-FA-025U-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	15.75	16.75	16.43	17.43	18.23	14.60	15.60	15.29	16.29	17.08
	3H	16.45	17.35	17.15	18.05	18.88	20.76	21.66	21.46	22.35	23.18
	4H	16.87	17.71	17.59	18.42	19.26	22.05	22.89	22.76	23.59	24.44
	6H	17.23	18.01	17.96	18.72	19.58	22.66	23.43	23.39	24.15	25.01
	8H	17.35	18.09	18.09	18.82	19.68	22.79	23.52	23.53	24.26	25.12
	12H	17.43	18.13	18.17	18.86	19.74	22.83	23.53	23.57	24.26	25.14
4H	2H	16.16	17.00	16.87	17.70	18.55	15.15	15.99	15.87	16.70	17.54
	3H	17.16	17.86	17.89	18.61	19.47	21.49	22.19	22.21	22.93	23.79
	4H	17.73	18.36	18.47	19.11	20.00	22.94	23.58	23.68	24.32	25.21
	6H	18.21	18.76	18.97	19.53	20.43	23.68	24.23	24.45	25.00	25.90
	8H	18.38	18.90	19.15	19.66	20.57	23.85	24.37	24.62	25.13	26.04
	12H	18.50	18.96	19.29	19.75	20.67	23.92	24.38	24.71	25.17	26.08
8H	4H	18.84	19.35	19.60	20.11	21.02	23.07	23.58	23.84	24.35	25.26
	6H	19.45	19.87	20.24	20.68	21.59	23.96	24.38	24.75	25.19	26.10
	8H	19.68	20.06	20.49	20.87	21.79	24.20	24.58	25.01	25.39	26.32
	12H	19.86	20.19	20.67	20.99	21.98	24.33	24.66	25.14	25.46	26.45
12H	4H	18.99	19.45	19.77	20.24	21.15	23.04	23.50	23.82	24.29	25.20
	6H	19.72	20.10	20.53	20.91	21.83	23.96	24.34	24.77	25.15	26.07
	8H	20.03	20.36	20.84	21.15	22.14	24.25	24.58	25.06	25.38	26.37