

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: P855448

Luminaire Tested: SQ2-FA-100U-075D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855448  
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-075D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 750 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

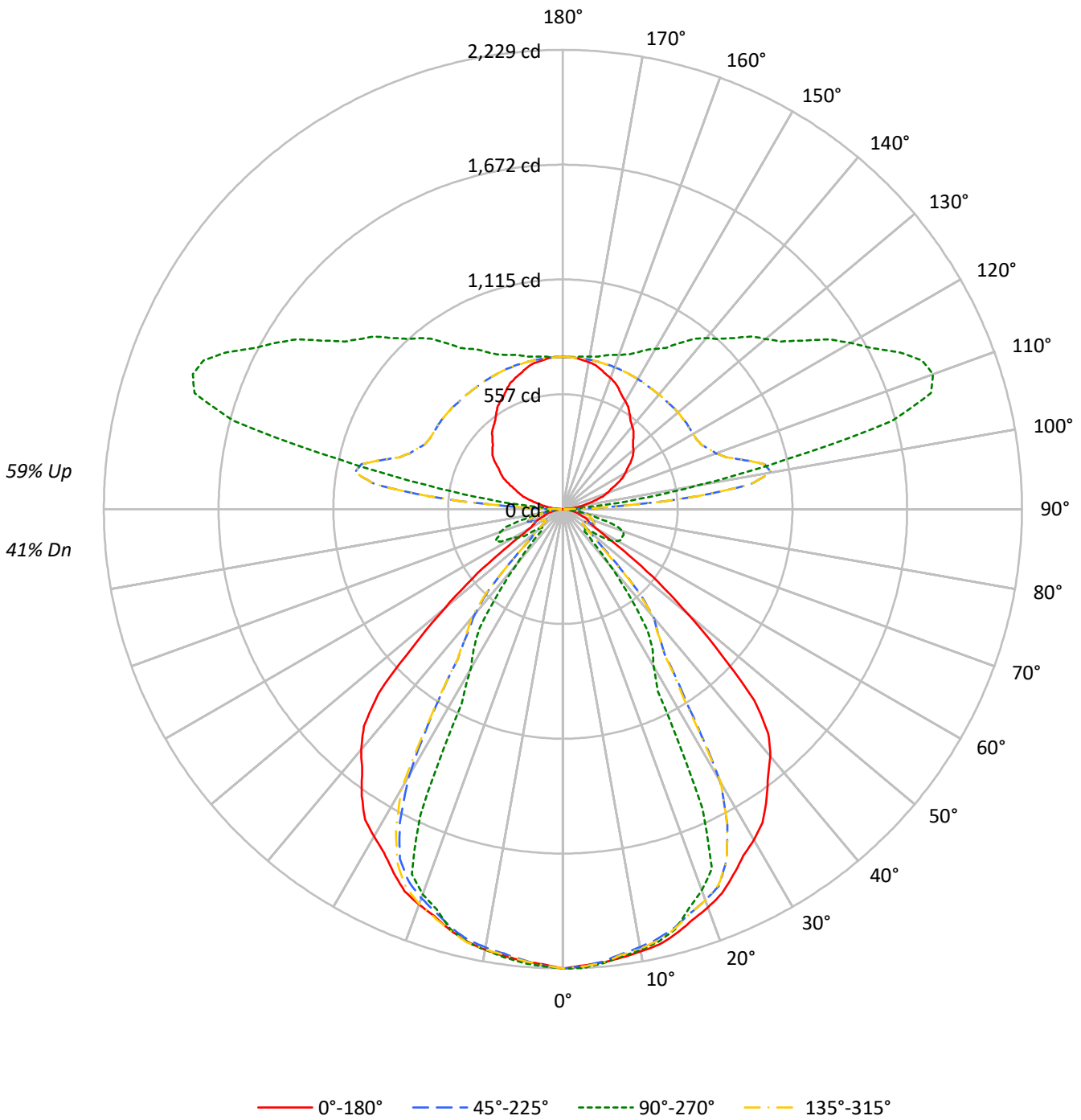
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7854.8 lumens  
Efficiency: N/A  
Efficacy: 132.5 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): 59.3  
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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	97	93	89	86	88	85	82	79	70	68	66	57	55	54	44	43	42	37
2	89	82	77	72	81	75	71	67	63	59	57	51	49	47	40	39	37	32
3	82	73	67	61	75	67	62	57	56	52	49	46	43	41	37	35	33	29
4	76	66	59	53	69	61	54	50	51	46	43	42	39	36	34	32	30	26
5	70	59	52	46	64	55	48	44	46	42	38	38	35	32	31	29	27	24
6	65	54	46	41	59	50	43	39	42	37	34	35	32	29	29	26	24	22
7	60	49	42	37	55	46	39	35	39	34	30	33	29	26	27	24	22	20
8	56	45	38	33	52	42	35	31	36	31	28	30	27	24	25	22	21	18
9	53	41	34	30	48	38	32	28	33	28	25	28	25	22	23	21	19	17
10	49	38	31	27	45	36	30	26	31	26	23	26	23	20	22	19	18	16

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

	0°	90°	180°	270°
0°	35994	35994	35994	35994
5°	35802	35858	35666	35832
10°	35749	35611	35611	35611
15°	35634	35266	35353	35266
20°	35355	33854	35096	34173
25°	34892	28572	34654	29172
30°	34573	16393	34196	16613
35°	33965	14083	33535	13884
40°	33025	7406	32104	7335
45°	30019	3185	28944	3185
50°	19806	3843	18791	3589
55°	11074	7099	10508	6438
60°	5971	9988	5864	8958
65°	5268	12138	5524	13811
70°	4919	14526	4683	15314
75°	4616	12483	4716	12895
80°	3914	8908	3914	9382
85°	3427	4983	3112	5910

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 30019 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.8	2.7
10°-20°	595.2	7.6
20°-30°	811.5	10.3
30°-40°	681.9	8.7
40°-50°	387.3	4.9
50°-60°	205.5	2.6
60°-70°	189.2	2.4
70°-80°	138.9	1.8
80°-90°	37.6	0.5
90°-100°	308.5	3.9
100°-110°	933.2	11.9
110°-120°	911.0	11.6
120°-130°	744.4	9.5
130°-140°	607.6	7.7
140°-150°	473.0	6.0
150°-160°	341.0	4.3
160°-170°	208.7	2.7
170°-180°	70.5	0.9
0°-30°	1616.4	20.6
0°-40°	2298.4	29.3
0°-60°	2891.2	36.8
0°-90°	3257.0	41.5
90°-120°	2152.7	27.4
90°-150°	3977.7	50.6
90°-180°	4598.0	58.5
0°-180°	7854.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2229	2229	2229	2229	2229	
5°	2209	2212	2201	2211	2209	210
15°	2132	2110	2115	2110	2132	601
25°	1959	1604	1945	1638	1959	903
35°	1723	714	1701	704	1723	1076
45°	1315	140	1268	140	1315	961
55°	393	252	373	229	393	379
65°	138	318	145	362	138	138
75°	74	200	76	207	74	76
85°	18	27	17	32	18	21
90°	0	7	0	7	0	3
95°	38	136	38	136	38	45
105°	162	1654	162	1654	162	171
115°	289	1801	289	1801	289	286
125°	404	1425	404	1425	404	359
135°	484	1175	484	1175	484	374
145°	565	982	565	982	565	354
155°	644	836	644	836	644	296
165°	704	771	704	771	704	198
175°	736	741	736	741	736	70
180°	739	739	739	739	739	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3
2.5°	2217.2	2250.0	2221.1	2217.4	2229.3	2226.6	2222.5	2238.0	2211.8	2238.0	2217.2
5°	2209.0	2246.9	2204.0	2192.7	2212.4	2199.2	2210.8	2233.5	2200.6	2230.2	2197.2
7.5°	2195.3	2228.8	2177.4	2170.2	2189.6	2178.0	2182.8	2214.5	2186.9	2206.3	2176.5
10°	2180.5	2210.1	2158.7	2154.0	2172.1	2160.5	2165.3	2198.4	2172.1	2190.1	2160.3
12.5°	2164.4	2187.3	2135.8	2133.7	2149.2	2141.7	2143.9	2171.6	2150.5	2168.7	2140.1
15°	2131.8	2153.1	2101.5	2093.4	2109.8	2103.3	2106.6	2131.4	2115.0	2126.4	2101.5
17.5°	2091.4	2108.4	2057.0	2032.9	2033.5	2041.8	2057.0	2087.0	2072.2	2087.4	2052.0
20°	2057.7	2077.4	2020.8	1973.6	1970.3	1978.6	2020.8	2050.9	2042.6	2059.0	2009.0
22.5°	2018.7	2031.9	1980.5	1900.8	1889.7	1897.9	1975.0	2010.7	2007.6	2018.8	1956.6
25°	1958.6	1971.7	1877.9	1763.3	1603.8	1753.5	1881.2	1945.2	1945.2	1955.0	1872.8
27.5°	1897.4	1897.7	1727.9	1132.4	999.0	1091.6	1725.6	1864.2	1879.9	1875.0	1713.5
30°	1854.4	1842.8	1531.6	915.4	879.3	902.3	1533.2	1807.9	1834.2	1816.0	1492.9
32.5°	1804.6	1772.0	1130.8	841.7	812.1	832.4	1093.5	1741.1	1787.1	1748.0	1174.1
35°	1723.2	1637.7	862.4	744.1	714.5	740.8	855.8	1609.3	1701.4	1596.1	891.1
37.5°	1635.4	1301.8	759.3	592.7	528.9	579.9	755.5	1287.8	1599.9	1257.9	758.6
40°	1566.9	1022.8	682.6	433.5	351.4	408.9	677.6	975.8	1523.2	1049.7	665.8
42.5°	1475.4	898.4	548.1	275.4	215.5	252.1	525.6	877.7	1429.0	909.6	529.9
45°	1314.7	772.2	324.4	151.0	139.5	146.1	299.3	758.0	1267.6	741.5	331.2
47.5°	1041.3	589.0	208.5	128.4	140.9	128.4	202.1	570.2	983.5	569.3	208.1
50°	788.5	459.8	161.4	129.9	153.0	129.9	156.4	444.0	748.1	485.2	159.7
52.5°	584.1	384.1	131.8	142.5	183.9	145.1	128.1	374.0	554.5	391.3	124.7
55°	393.4	301.4	105.9	188.1	252.2	193.0	105.9	292.6	373.3	289.4	102.6
57.5°	249.5	224.2	107.2	241.8	287.9	246.4	109.0	216.1	239.4	217.0	94.2
60°	184.9	176.7	119.3	256.7	309.3	260.0	121.1	170.0	181.6	168.4	100.9
62.5°	152.7	139.1	143.6	278.1	321.4	270.8	146.6	132.7	158.7	127.1	111.6
65°	137.9	90.2	169.8	281.6	317.7	281.6	171.4	85.4	144.6	92.0	151.3
67.5°	124.5	66.9	164.1	279.7	319.8	280.3	160.0	63.7	119.3	62.1	154.6
70°	104.2	59.9	154.6	284.6	307.7	274.8	154.6	58.0	99.2	56.4	181.6
72.5°	86.7	56.9	143.9	262.8	272.7	253.0	145.2	56.5	87.1	50.9	170.8
75°	74.0	55.9	137.9	209.9	200.1	200.1	134.5	54.3	75.6	51.0	132.9
77.5°	55.5	49.5	114.3	137.1	129.5	129.5	112.3	47.9	52.8	44.9	107.9
80°	42.1	45.3	94.2	100.8	95.8	95.8	90.8	43.7	42.1	42.1	89.2
82.5°	32.6	38.6	72.6	73.9	70.3	69.0	70.6	38.2	32.6	35.2	68.9
85°	18.5	26.7	38.7	31.8	26.9	25.3	36.9	25.1	16.8	25.1	36.9
87.5°	6.8	12.5	8.2	7.0	6.8	7.0	8.2	12.5	6.8	11.1	9.6
90°	0.0	2.2	13.9	8.0	7.0	8.0	13.9	2.2	0.0	2.2	13.9
92.5°	12.9	52.4	188.3	62.5	45.0	62.5	188.3	52.4	12.9	52.4	188.3
95°	38.2	121.1	582.2	215.1	135.7	215.1	582.2	121.1	38.2	121.1	582.2
97.5°	74.0	154.1	917.6	607.2	369.8	607.2	917.6	154.1	74.0	154.1	917.6
100°	96.3	174.5	1025.2	991.2	665.7	991.2	1025.2	174.5	96.3	174.5	1025.2
102.5°	121.3	196.8	1002.9	1390.2	1108.3	1390.2	1002.9	196.8	121.3	196.8	1002.9
105°	162.3	228.2	916.2	1740.1	1653.8	1740.1	916.2	228.2	162.3	228.2	916.2
107.5°	201.4	264.2	832.7	1774.7	1874.4	1774.7	832.7	264.2	201.4	264.2	832.7
110°	227.4	287.4	791.0	1731.1	1912.4	1731.1	791.0	287.4	227.4	287.4	791.0



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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°	252.4	310.7	765.9	1657.9	1887.5	1657.9	765.9	310.7	252.4	310.7	765.9
115°	288.8	344.4	741.1	1533.6	1801.1	1533.6	741.1	344.4	288.8	344.4	741.1
117.5°	324.9	377.6	732.3	1417.0	1691.0	1417.0	732.3	377.6	324.9	377.6	732.3
120°	349.0	399.0	729.5	1349.0	1612.1	1349.0	729.5	399.0	349.0	399.0	729.5
122.5°	371.4	418.5	729.5	1289.2	1532.3	1289.2	729.5	418.5	371.4	418.5	729.5
125°	403.6	447.9	730.7	1211.1	1425.4	1211.1	730.7	447.9	403.6	447.9	730.7
127.5°	429.8	475.6	729.5	1152.1	1334.9	1152.1	729.5	475.6	429.8	475.6	729.5
130°	446.5	494.1	729.5	1118.3	1283.9	1118.3	729.5	494.1	446.5	494.1	729.5
132.5°	461.4	509.9	728.6	1087.4	1240.2	1087.4	728.6	509.9	461.4	509.9	728.6
135°	483.6	534.7	726.0	1044.4	1174.8	1044.4	726.0	534.7	483.6	534.7	726.0
137.5°	508.5	556.9	726.0	998.5	1119.4	998.5	726.0	556.9	508.5	556.9	726.0
140°	524.2	571.9	726.0	968.7	1083.2	968.7	726.0	571.9	524.2	571.9	726.0
142.5°	540.0	585.8	725.1	941.4	1041.5	941.4	725.1	585.8	540.0	585.8	725.1
145°	564.9	606.8	726.0	898.4	982.3	898.4	726.0	606.8	564.9	606.8	726.0
147.5°	589.6	625.2	727.4	863.0	927.3	863.0	727.4	625.2	589.6	625.2	727.4
150°	605.4	638.3	728.4	843.3	897.7	843.3	728.4	638.3	605.4	638.3	728.4
152.5°	620.2	649.5	729.3	826.3	870.8	826.3	729.3	649.5	620.2	649.5	729.3
155°	643.7	665.2	730.7	805.5	836.2	805.5	730.7	665.2	643.7	665.2	730.7
157.5°	664.0	681.5	732.1	790.3	811.6	790.3	732.1	681.5	664.0	681.5	732.1
160°	676.2	690.8	733.0	780.9	796.8	780.9	733.0	690.8	676.2	690.8	733.0
162.5°	688.2	699.4	733.9	772.4	785.6	772.4	733.9	699.4	688.2	699.4	733.9
165°	704.0	711.9	734.1	762.2	771.3	762.2	734.1	711.9	704.0	711.9	734.1
167.5°	717.4	721.5	735.5	754.1	758.0	754.1	735.5	721.5	717.4	721.5	735.5
170°	724.9	727.1	736.4	750.4	751.6	750.4	736.4	727.1	724.9	727.1	736.4
172.5°	729.5	730.8	736.4	746.7	746.9	746.7	736.4	730.8	729.5	730.8	736.4
175°	736.4	736.4	737.6	743.4	741.1	743.4	737.6	736.4	736.4	736.4	737.6
177.5°	739.7	738.7	737.8	740.6	738.7	740.6	737.8	738.7	739.7	738.7	737.8
180°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2229.3	2229.3	2229.3	2229.3	2229.3	2229.3
2.5°	2211.9	2221.1	2221.1	2215.8	2242.1	2217.2
5°	2189.4	2210.8	2200.9	2200.6	2233.7	2209.0
7.5°	2173.6	2193.6	2184.4	2182.6	2215.0	2195.3
10°	2157.3	2172.1	2165.5	2170.4	2200.3	2180.5
12.5°	2134.4	2151.9	2145.4	2153.0	2180.1	2164.4
15°	2095.0	2109.8	2113.2	2116.6	2148.2	2131.8
17.5°	2030.0	2037.2	2053.7	2077.0	2109.8	2091.4
20°	1979.0	1988.9	1998.7	2039.2	2077.4	2057.7
22.5°	1920.8	1917.6	1940.6	1988.2	2035.8	2018.7
25°	1764.1	1637.5	1777.2	1899.7	1963.5	1958.6
27.5°	1228.3	1065.9	1209.6	1753.5	1887.5	1897.4
30°	966.7	891.1	965.0	1565.1	1831.3	1854.4
32.5°	858.2	806.3	851.3	1191.3	1760.6	1804.6
35°	740.6	704.4	740.6	891.1	1621.3	1723.2
37.5°	592.8	518.8	591.4	770.0	1310.6	1635.4
40°	441.7	348.0	428.5	689.3	1047.5	1566.9
42.5°	294.3	224.2	278.5	542.7	906.0	1475.4
45°	159.3	139.5	152.7	327.8	739.3	1314.7
47.5°	124.9	132.2	124.9	206.7	565.6	1041.3
50°	119.9	142.9	119.9	159.7	467.9	788.5
52.5°	130.6	155.0	129.4	126.1	381.9	584.1
55°	148.1	228.7	149.8	102.6	279.9	393.4
57.5°	210.8	257.2	213.2	97.2	215.6	249.5
60°	216.5	277.4	214.9	102.6	166.9	184.9
62.5°	256.2	343.3	255.8	117.4	124.0	152.7
65°	328.5	361.5	331.9	149.6	88.6	137.9
67.5°	311.9	335.3	308.6	160.4	61.0	124.5
70°	306.4	324.4	303.1	183.2	56.5	104.2
72.5°	285.9	288.2	279.9	169.8	50.9	86.7
75°	221.5	206.7	213.4	146.3	50.9	74.0
77.5°	137.8	131.8	132.7	111.6	45.0	55.5
80°	104.2	100.9	99.2	94.2	42.1	42.1
82.5°	77.3	74.0	72.4	72.6	35.2	32.6
85°	35.2	31.9	30.3	42.1	25.1	18.5
87.5°	8.4	8.2	7.0	9.6	9.8	6.8
90°	8.0	7.0	8.0	13.9	2.2	0.0
92.5°	62.5	45.0	62.5	188.3	52.4	12.9
95°	215.1	135.7	215.1	582.2	121.1	38.2
97.5°	607.2	369.8	607.2	917.6	154.1	74.0
100°	991.2	665.7	991.2	1025.2	174.5	96.3
102.5°	1390.2	1108.3	1390.2	1002.9	196.8	121.3
105°	1740.1	1653.8	1740.1	916.2	228.2	162.3
107.5°	1774.7	1874.4	1774.7	832.7	264.2	201.4
110°	1731.1	1912.4	1731.1	791.0	287.4	227.4





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1657.9	1887.5	1657.9	765.9	310.7	252.4
115°	1533.6	1801.1	1533.6	741.1	344.4	288.8
117.5°	1417.0	1691.0	1417.0	732.3	377.6	324.9
120°	1349.0	1612.1	1349.0	729.5	399.0	349.0
122.5°	1289.2	1532.3	1289.2	729.5	418.5	371.4
125°	1211.1	1425.4	1211.1	730.7	447.9	403.6
127.5°	1152.1	1334.9	1152.1	729.5	475.6	429.8
130°	1118.3	1283.9	1118.3	729.5	494.1	446.5
132.5°	1087.4	1240.2	1087.4	728.6	509.9	461.4
135°	1044.4	1174.8	1044.4	726.0	534.7	483.6
137.5°	998.5	1119.4	998.5	726.0	556.9	508.5
140°	968.7	1083.2	968.7	726.0	571.9	524.2
142.5°	941.4	1041.5	941.4	725.1	585.8	540.0
145°	898.4	982.3	898.4	726.0	606.8	564.9
147.5°	863.0	927.3	863.0	727.4	625.2	589.6
150°	843.3	897.7	843.3	728.4	638.3	605.4
152.5°	826.3	870.8	826.3	729.3	649.5	620.2
155°	805.5	836.2	805.5	730.7	665.2	643.7
157.5°	790.3	811.6	790.3	732.1	681.5	664.0
160°	780.9	796.8	780.9	733.0	690.8	676.2
162.5°	772.4	785.6	772.4	733.9	699.4	688.2
165°	762.2	771.3	762.2	734.1	711.9	704.0
167.5°	754.1	758.0	754.1	735.5	721.5	717.4
170°	750.4	751.6	750.4	736.4	727.1	724.9
172.5°	746.7	746.9	746.7	736.4	730.8	729.5
175°	743.4	741.1	743.4	737.6	736.4	736.4
177.5°	740.6	738.7	740.6	737.8	738.7	739.7
180°	738.7	738.7	738.7	738.7	738.7	738.7

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TEST NUMBER: P855448

CATALOG NUMBER: SQ2-FA-100U-075D-840-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	11.50	12.21	12.54	13.24	14.64	10.35	11.06	11.40	12.10	13.50
	3H	12.19	12.82	13.25	13.87	15.29	16.50	17.13	17.55	18.18	19.60
	4H	12.59	13.20	13.66	14.25	15.67	17.77	18.37	18.84	19.42	20.84
	6H	12.95	13.50	14.02	14.55	15.99	18.37	18.92	19.45	19.98	21.41
	8H	13.06	13.59	14.14	14.65	16.08	18.49	19.02	19.57	20.08	21.51
	12H	13.13	13.63	14.21	14.69	16.14	18.53	19.03	19.61	20.09	21.54
4H	2H	11.88	12.48	12.95	13.53	14.95	10.87	11.48	11.95	12.52	13.95
	3H	12.87	13.37	13.95	14.45	15.88	17.19	17.69	18.27	18.77	20.20
	4H	13.43	13.89	14.51	14.96	16.41	18.64	19.10	19.72	20.17	21.62
	6H	13.90	14.29	14.99	15.38	16.83	19.37	19.76	20.46	20.85	22.31
	8H	14.07	14.44	15.16	15.52	16.98	19.54	19.90	20.63	20.99	22.45
	12H	14.18	14.51	15.29	15.61	17.08	19.59	19.92	20.70	21.02	22.49
8H	4H	14.52	14.89	15.61	15.97	17.44	18.76	19.12	19.85	20.21	21.67
	6H	15.13	15.43	16.24	16.56	18.02	19.63	19.93	20.74	21.06	22.52
	8H	15.36	15.63	16.48	16.74	18.22	19.88	20.15	21.00	21.25	22.74
	12H	15.53	15.76	16.65	16.86	18.39	20.00	20.23	21.12	21.33	22.85
12H	4H	14.66	14.99	15.77	16.09	17.56	18.71	19.04	19.82	20.14	21.61
	6H	15.40	15.67	16.52	16.78	18.26	19.64	19.91	20.76	21.01	22.50
	8H	15.70	15.93	16.82	17.03	18.55	19.92	20.15	21.04	21.25	22.77