

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: P855251

Luminaire Tested: SQ2-FA-100U-075D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855251
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-835-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

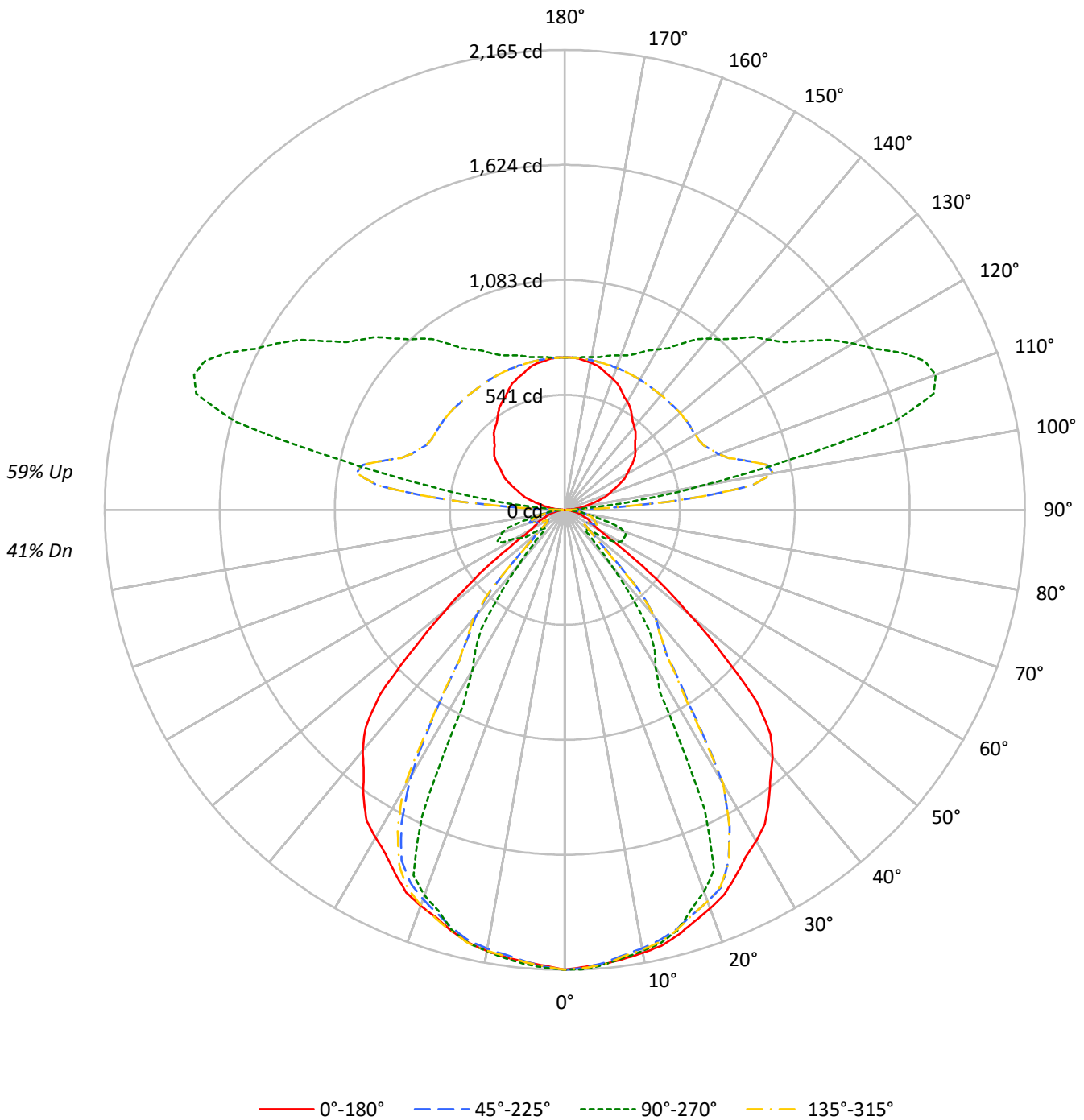
Lumens per Lamp: N/A
Luminaire Lumens: 7627.5 lumens
Efficiency: N/A
Efficacy: 128.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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

TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

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	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°	34953	34953	34953	34953
5°	34767	34820	34634	34794
10°	34713	34580	34580	34580
15°	34601	34247	34328	34247
20°	34333	32874	34081	33184
25°	33882	27745	33651	28328
30°	33572	15918	33206	16132
35°	32981	13675	32564	13482
40°	32068	7191	31175	7122
45°	29149	3094	28106	3094
50°	19233	3733	18246	3484
55°	10753	6894	10204	6249
60°	5800	9697	5693	8696
65°	5116	11786	5364	13410
70°	4777	14106	4546	14875
75°	4485	12121	4579	12526
80°	3803	8647	3803	9112
85°	3335	4835	3020	5743

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 29149 cd/sqm



TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.7	2.7
10°-20°	577.9	7.6
20°-30°	788.0	10.3
30°-40°	662.2	8.7
40°-50°	376.1	4.9
50°-60°	199.6	2.6
60°-70°	183.7	2.4
70°-80°	134.9	1.8
80°-90°	36.5	0.5
90°-100°	299.6	3.9
100°-110°	906.1	11.9
110°-120°	884.6	11.6
120°-130°	722.8	9.5
130°-140°	590.0	7.7
140°-150°	459.3	6.0
150°-160°	331.1	4.3
160°-170°	202.7	2.7
170°-180°	68.4	0.9
0°-30°	1569.6	20.6
0°-40°	2231.8	29.3
0°-60°	2807.5	36.8
0°-90°	3162.7	41.5
90°-120°	2090.4	27.4
90°-150°	3862.5	50.6
90°-180°	4465.0	58.5
0°-180°	7627.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2165	2165	2165	2165	2165	
5°	2145	2148	2137	2147	2145	204
15°	2070	2049	2054	2049	2070	584
25°	1902	1557	1889	1590	1902	877
35°	1673	694	1652	684	1673	1045
45°	1277	136	1231	136	1277	933
55°	382	245	362	222	382	368
65°	134	308	140	351	134	134
75°	72	194	73	201	72	74
85°	18	26	16	31	18	20
90°	0	7	0	7	0	3
95°	37	132	37	132	37	44
105°	158	1606	158	1606	158	166
115°	280	1749	280	1749	280	277
125°	392	1384	392	1384	392	348
135°	470	1141	470	1141	470	364
145°	548	954	548	954	548	343
155°	625	812	625	812	625	288
165°	684	749	684	749	684	193
175°	715	720	715	720	715	68
180°	717	717	717	717	717	



TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8
2.5°	2153.0	2184.9	2156.8	2153.2	2164.8	2162.2	2158.2	2173.2	2147.8	2173.2	2153.0
5°	2145.1	2181.8	2140.2	2129.2	2148.4	2135.6	2146.8	2168.8	2136.9	2165.7	2133.6
7.5°	2131.7	2164.3	2114.4	2107.4	2126.2	2115.0	2119.6	2150.4	2123.6	2142.5	2113.5
10°	2117.3	2146.1	2096.2	2091.7	2109.2	2098.0	2102.6	2134.8	2109.2	2126.7	2097.8
12.5°	2101.7	2124.0	2074.0	2072.0	2087.0	2079.7	2081.8	2108.7	2088.3	2105.9	2078.2
15°	2070.0	2090.7	2040.6	2032.8	2048.8	2042.4	2045.6	2069.7	2053.7	2064.8	2040.6
17.5°	2030.9	2047.4	1997.5	1974.1	1974.6	1982.7	1997.5	2026.6	2012.2	2026.9	1992.6
20°	1998.2	2017.3	1962.3	1916.5	1913.3	1921.3	1962.3	1991.5	1983.5	1999.4	1950.9
22.5°	1960.3	1973.1	1923.1	1845.7	1835.0	1842.9	1917.8	1952.5	1949.5	1960.4	1900.0
25°	1901.9	1914.7	1823.6	1712.2	1557.4	1702.7	1826.7	1888.9	1888.9	1898.4	1818.6
27.5°	1842.5	1842.8	1677.9	1099.6	970.1	1060.0	1675.7	1810.2	1825.5	1820.7	1663.9
30°	1800.7	1789.5	1487.2	888.9	853.8	876.1	1488.8	1755.5	1781.1	1763.5	1449.7
32.5°	1752.4	1720.7	1098.1	817.3	788.5	808.3	1061.8	1690.7	1735.4	1697.4	1140.2
35°	1673.3	1590.3	837.4	722.6	693.8	719.4	831.0	1562.7	1652.1	1549.9	865.3
37.5°	1588.1	1264.1	737.3	575.6	513.5	563.1	733.7	1250.5	1553.5	1221.5	736.6
40°	1521.5	993.1	662.8	421.0	341.2	397.1	657.9	947.5	1479.1	1019.3	646.5
42.5°	1432.7	872.4	532.2	267.4	209.2	244.8	510.4	852.3	1387.6	883.3	514.6
45°	1276.6	749.8	315.1	146.7	135.5	141.9	290.6	736.0	1230.9	720.1	321.6
47.5°	1011.1	571.9	202.5	124.7	136.8	124.7	196.2	553.7	955.0	552.8	202.1
50°	765.7	446.4	156.7	126.2	148.6	126.2	151.9	431.2	726.4	471.1	155.0
52.5°	567.2	373.0	128.0	138.4	178.6	140.9	124.4	363.2	538.4	380.0	121.1
55°	382.0	292.6	102.9	182.7	244.9	187.4	102.9	284.2	362.5	281.0	99.6
57.5°	242.3	217.7	104.1	234.8	279.5	239.2	105.8	209.8	232.4	210.7	91.4
60°	179.6	171.6	115.9	249.3	300.3	252.5	117.6	165.1	176.3	163.5	98.0
62.5°	148.2	135.1	139.4	270.0	312.1	263.0	142.4	128.9	154.1	123.5	108.4
65°	133.9	87.6	164.9	273.4	308.5	273.4	166.5	83.0	140.4	89.3	146.9
67.5°	120.9	65.0	159.3	271.6	310.5	272.2	155.4	61.9	115.9	60.3	150.2
70°	101.2	58.2	150.2	276.4	298.8	266.8	150.2	56.4	96.3	54.8	176.3
72.5°	84.2	55.2	139.8	255.2	264.8	245.7	141.0	54.9	84.5	49.5	165.9
75°	71.9	54.3	133.9	203.8	194.3	194.3	130.6	52.7	73.4	49.6	129.0
77.5°	53.9	48.1	111.0	133.1	125.7	125.7	109.1	46.5	51.3	43.6	104.8
80°	40.9	44.0	91.4	97.9	93.0	93.0	88.2	42.4	40.9	40.9	86.6
82.5°	31.7	37.5	70.5	71.7	68.2	67.0	68.6	37.1	31.7	34.2	66.9
85°	18.0	25.9	37.6	30.9	26.1	24.6	35.9	24.3	16.3	24.3	35.9
87.5°	6.6	12.1	7.9	6.8	6.6	6.8	7.9	12.1	6.6	10.8	9.3
90°	0.0	2.2	13.5	7.8	6.8	7.8	13.5	2.2	0.0	2.2	13.5
92.5°	12.6	50.9	182.9	60.7	43.7	60.7	182.9	50.9	12.6	50.9	182.9
95°	37.1	117.6	565.4	208.9	131.7	208.9	565.4	117.6	37.1	117.6	565.4
97.5°	71.9	149.6	891.1	589.6	359.1	589.6	891.1	149.6	71.9	149.6	891.1
100°	93.5	169.4	995.5	962.5	646.4	962.5	995.5	169.4	93.5	169.4	995.5
102.5°	117.8	191.1	973.9	1350.0	1076.2	1350.0	973.9	191.1	117.8	191.1	973.9
105°	157.6	221.6	889.7	1689.7	1605.9	1689.7	889.7	221.6	157.6	221.6	889.7
107.5°	195.6	256.5	808.6	1723.3	1820.2	1723.3	808.6	256.5	195.6	256.5	808.6
110°	220.8	279.1	768.1	1681.0	1857.1	1681.0	768.1	279.1	220.8	279.1	768.1



TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	245.1	301.7	743.7	1609.9	1832.8	1609.9	743.7	301.7	245.1	301.7	743.7
115°	280.4	334.4	719.6	1489.2	1749.0	1489.2	719.6	334.4	280.4	334.4	719.6
117.5°	315.5	366.7	711.1	1376.0	1642.0	1376.0	711.1	366.7	315.5	366.7	711.1
120°	338.9	387.5	708.4	1309.9	1565.4	1309.9	708.4	387.5	338.9	387.5	708.4
122.5°	360.7	406.4	708.4	1251.8	1487.9	1251.8	708.4	406.4	360.7	406.4	708.4
125°	391.9	434.9	709.6	1176.0	1384.1	1176.0	709.6	434.9	391.9	434.9	709.6
127.5°	417.4	461.8	708.4	1118.8	1296.2	1118.8	708.4	461.8	417.4	461.8	708.4
130°	433.5	479.8	708.4	1085.9	1246.8	1085.9	708.4	479.8	433.5	479.8	708.4
132.5°	448.0	495.1	707.5	1056.0	1204.3	1056.0	707.5	495.1	448.0	495.1	707.5
135°	469.6	519.2	705.0	1014.2	1140.8	1014.2	705.0	519.2	469.6	519.2	705.0
137.5°	493.7	540.8	705.0	969.6	1087.0	969.6	705.0	540.8	493.7	540.8	705.0
140°	509.0	555.3	705.0	940.6	1051.9	940.6	705.0	555.3	509.0	555.3	705.0
142.5°	524.4	568.9	704.1	914.2	1011.4	914.2	704.1	568.9	524.4	568.9	704.1
145°	548.5	589.3	705.0	872.4	953.9	872.4	705.0	589.3	548.5	589.3	705.0
147.5°	572.5	607.1	706.4	838.0	900.5	838.0	706.4	607.1	572.5	607.1	706.4
150°	587.9	619.8	707.3	818.9	871.7	818.9	707.3	619.8	587.9	619.8	707.3
152.5°	602.3	630.7	708.2	802.3	845.6	802.3	708.2	630.7	602.3	630.7	708.2
155°	625.0	646.0	709.6	782.2	812.0	782.2	709.6	646.0	625.0	646.0	709.6
157.5°	644.8	661.8	710.9	767.4	788.1	767.4	710.9	661.8	644.8	661.8	710.9
160°	656.6	670.9	711.8	758.3	773.7	758.3	711.8	670.9	656.6	670.9	711.8
162.5°	668.2	679.1	712.6	750.1	762.9	750.1	712.6	679.1	668.2	679.1	712.6
165°	683.6	691.3	712.8	740.1	748.9	740.1	712.8	691.3	683.6	691.3	712.8
167.5°	696.7	700.6	714.2	732.3	736.0	732.3	714.2	700.6	696.7	700.6	714.2
170°	703.9	706.0	715.1	728.7	729.8	728.7	715.1	706.0	703.9	706.0	715.1
172.5°	708.4	709.7	715.1	725.1	725.3	725.1	715.1	709.7	708.4	709.7	715.1
175°	715.1	715.1	716.2	721.9	719.6	721.9	716.2	715.1	715.1	715.1	716.2
177.5°	718.3	717.4	716.5	719.2	717.4	719.2	716.5	717.4	718.3	717.4	716.5
180°	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4



TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2164.8	2164.8	2164.8	2164.8	2164.8	2164.8
2.5°	2147.9	2156.8	2156.8	2151.6	2177.2	2153.0
5°	2126.1	2146.8	2137.1	2136.9	2169.1	2145.1
7.5°	2110.7	2130.1	2121.2	2119.4	2150.8	2131.7
10°	2094.8	2109.2	2102.9	2107.6	2136.6	2117.3
12.5°	2072.6	2089.6	2083.3	2090.6	2117.0	2101.7
15°	2034.4	2048.8	2052.0	2055.3	2086.0	2070.0
17.5°	1971.2	1978.3	1994.2	2016.9	2048.8	2030.9
20°	1921.7	1931.3	1940.8	1980.2	2017.3	1998.2
22.5°	1865.2	1862.0	1884.4	1930.6	1976.9	1960.3
25°	1713.0	1590.1	1725.8	1844.7	1906.6	1901.9
27.5°	1192.8	1035.0	1174.6	1702.7	1832.8	1842.5
30°	938.7	865.3	937.0	1519.8	1778.3	1800.7
32.5°	833.4	783.0	826.7	1156.8	1709.6	1752.4
35°	719.2	684.0	719.2	865.3	1574.4	1673.3
37.5°	575.7	503.8	574.3	747.7	1272.7	1588.1
40°	428.9	337.9	416.1	669.4	1017.1	1521.5
42.5°	285.7	217.7	270.5	527.0	879.8	1432.7
45°	154.7	135.5	148.2	318.3	717.9	1276.6
47.5°	121.3	128.3	121.3	200.8	549.2	1011.1
50°	116.4	138.7	116.4	155.0	454.4	765.7
52.5°	126.9	150.5	125.6	122.4	370.8	567.2
55°	143.8	222.0	145.4	99.6	271.8	382.0
57.5°	204.7	249.8	207.0	94.4	209.4	242.3
60°	210.3	269.3	208.7	99.6	162.1	179.6
62.5°	248.7	333.4	248.4	114.0	120.4	148.2
65°	319.0	351.0	322.3	145.3	86.0	133.9
67.5°	302.8	325.6	299.7	155.7	59.2	120.9
70°	297.5	315.1	294.3	177.9	54.9	101.2
72.5°	277.6	279.9	271.8	164.9	49.5	84.2
75°	215.1	200.8	207.2	142.0	49.5	71.9
77.5°	133.8	128.0	128.9	108.4	43.7	53.9
80°	101.2	98.0	96.3	91.4	40.9	40.9
82.5°	75.0	71.9	70.3	70.5	34.2	31.7
85°	34.2	31.0	29.4	40.9	24.3	18.0
87.5°	8.1	7.9	6.8	9.3	9.5	6.6
90°	7.8	6.8	7.8	13.5	2.2	0.0
92.5°	60.7	43.7	60.7	182.9	50.9	12.6
95°	208.9	131.7	208.9	565.4	117.6	37.1
97.5°	589.6	359.1	589.6	891.1	149.6	71.9
100°	962.5	646.4	962.5	995.5	169.4	93.5
102.5°	1350.0	1076.2	1350.0	973.9	191.1	117.8
105°	1689.7	1605.9	1689.7	889.7	221.6	157.6
107.5°	1723.3	1820.2	1723.3	808.6	256.5	195.6
110°	1681.0	1857.1	1681.0	768.1	279.1	220.8



TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1609.9	1832.8	1609.9	743.7	301.7	245.1
115°	1489.2	1749.0	1489.2	719.6	334.4	280.4
117.5°	1376.0	1642.0	1376.0	711.1	366.7	315.5
120°	1309.9	1565.4	1309.9	708.4	387.5	338.9
122.5°	1251.8	1487.9	1251.8	708.4	406.4	360.7
125°	1176.0	1384.1	1176.0	709.6	434.9	391.9
127.5°	1118.8	1296.2	1118.8	708.4	461.8	417.4
130°	1085.9	1246.8	1085.9	708.4	479.8	433.5
132.5°	1056.0	1204.3	1056.0	707.5	495.1	448.0
135°	1014.2	1140.8	1014.2	705.0	519.2	469.6
137.5°	969.6	1087.0	969.6	705.0	540.8	493.7
140°	940.6	1051.9	940.6	705.0	555.3	509.0
142.5°	914.2	1011.4	914.2	704.1	568.9	524.4
145°	872.4	953.9	872.4	705.0	589.3	548.5
147.5°	838.0	900.5	838.0	706.4	607.1	572.5
150°	818.9	871.7	818.9	707.3	619.8	587.9
152.5°	802.3	845.6	802.3	708.2	630.7	602.3
155°	782.2	812.0	782.2	709.6	646.0	625.0
157.5°	767.4	788.1	767.4	710.9	661.8	644.8
160°	758.3	773.7	758.3	711.8	670.9	656.6
162.5°	750.1	762.9	750.1	712.6	679.1	668.2
165°	740.1	748.9	740.1	712.8	691.3	683.6
167.5°	732.3	736.0	732.3	714.2	700.6	696.7
170°	728.7	729.8	728.7	715.1	706.0	703.9
172.5°	725.1	725.3	725.1	715.1	709.7	708.4
175°	721.9	719.6	721.9	716.2	715.1	715.1
177.5°	719.2	717.4	719.2	716.5	717.4	718.3
180°	717.4	717.4	717.4	717.4	717.4	717.4

TEST NUMBER: P855251

CATALOG NUMBER: SQ2-FA-100U-075D-835-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	11.39	12.10	12.44	13.14	14.54	10.25	10.96	11.30	12.00	13.39
	3H	12.09	12.72	13.14	13.77	15.19	16.40	17.03	17.45	18.08	19.49
	4H	12.49	13.10	13.56	14.14	15.57	17.67	18.27	18.73	19.32	20.74
	6H	12.84	13.40	13.92	14.45	15.88	18.27	18.82	19.34	19.88	21.31
	8H	12.96	13.48	14.04	14.55	15.98	18.39	18.92	19.47	19.98	21.41
	12H	13.03	13.53	14.11	14.59	16.04	18.43	18.93	19.51	19.99	21.44
4H	2H	11.78	12.38	12.85	13.43	14.85	10.77	11.37	11.85	12.42	13.84
	3H	12.77	13.27	13.85	14.35	15.78	17.09	17.59	18.17	18.67	20.10
	4H	13.33	13.79	14.41	14.85	16.31	18.54	19.00	19.62	20.06	21.52
	6H	13.80	14.19	14.89	15.28	16.73	19.27	19.66	20.36	20.75	22.20
	8H	13.97	14.34	15.06	15.42	16.88	19.43	19.80	20.53	20.89	22.35
	12H	14.08	14.41	15.19	15.51	16.98	19.49	19.82	20.60	20.92	22.39
8H	4H	14.42	14.79	15.51	15.87	17.34	18.65	19.02	19.74	20.10	21.57
	6H	15.03	15.33	16.14	16.45	17.92	19.53	19.83	20.64	20.96	22.42
	8H	15.26	15.53	16.38	16.63	18.12	19.78	20.05	20.90	21.15	22.63
	12H	15.43	15.66	16.55	16.76	18.28	19.90	20.13	21.02	21.23	22.75
12H	4H	14.56	14.89	15.67	15.99	17.46	18.61	18.94	19.72	20.04	21.51
	6H	15.30	15.57	16.42	16.67	18.16	19.54	19.80	20.66	20.91	22.39
	8H	15.60	15.83	16.72	16.93	18.45	19.82	20.05	20.94	21.15	22.67