

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: P855444

Luminaire Tested: SQ2-FA-125U-075D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855444
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-075D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 1250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

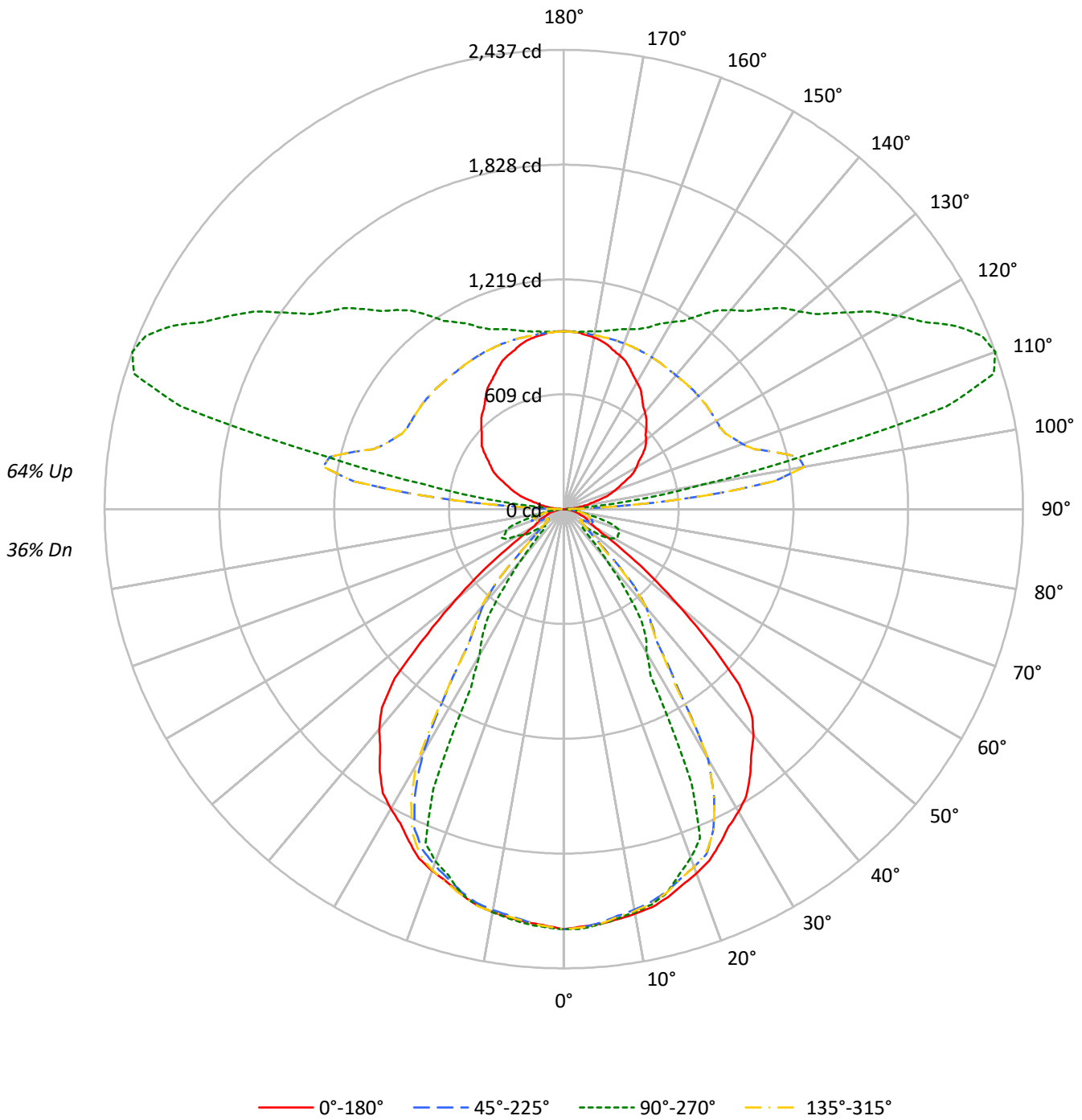
Lumens per Lamp: N/A
Luminaire Lumens: 9075.1 lumens
Efficiency: N/A
Efficacy: 128.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 70.6
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	104	104	104	104	94	94	94	94	75	75	75	59	59	59	43	43	43	36
1	95	91	88	85	86	83	80	77	67	65	63	53	51	50	39	39	38	32
2	88	81	75	71	79	74	69	65	60	57	54	47	45	43	36	34	33	28
3	81	72	65	60	73	66	60	56	54	50	47	43	40	38	33	31	30	25
4	74	64	57	52	67	59	53	48	49	44	41	39	36	33	30	28	26	23
5	69	58	51	45	62	53	47	42	44	39	36	36	32	30	28	26	24	20
6	64	52	45	40	58	48	42	37	40	35	32	33	29	27	26	23	22	19
7	59	48	40	35	54	44	38	33	37	32	29	30	27	24	24	21	20	17
8	55	44	36	32	50	40	34	30	34	29	26	28	24	22	22	20	18	16
9	51	40	33	28	47	37	31	27	31	27	23	26	22	20	21	18	17	15
10	48	37	30	26	44	34	28	24	29	24	21	24	21	18	19	17	15	14

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	2.3
10°-20°	595.2	6.6
20°-30°	811.5	8.9
30°-40°	681.9	7.5
40°-50°	387.3	4.3
50°-60°	205.5	2.3
60°-70°	189.2	2.1
70°-80°	138.9	1.5
80°-90°	37.4	0.4
90°-100°	360.7	4.0
100°-110°	1174.5	12.9
110°-120°	1161.7	12.8
120°-130°	949.4	10.5
130°-140°	775.9	8.6
140°-150°	604.4	6.7
150°-160°	435.6	4.8
160°-170°	266.3	2.9
170°-180°	89.8	1.0
0°-30°	1616.4	17.8
0°-40°	2298.4	25.3
0°-60°	2891.2	31.9
0°-90°	3256.7	35.9
90°-120°	2696.9	29.7
90°-150°	5026.6	55.4
90°-180°	5818.0	64.1
0°-180°	9075.1	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°	49	145	49	145	49	57
105°	200	2104	200	2104	200	213
115°	369	2298	369	2298	369	365
125°	513	1818	513	1818	513	456
135°	619	1501	619	1501	619	479
145°	724	1255	724	1255	724	453
155°	826	1065	826	1065	826	380
165°	901	982	901	982	901	254
175°	940	944	940	944	940	89
180°	943	943	943	943	943	



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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	12.7	7.0	6.8	6.8	6.8	7.0	12.7	6.8	11.3	8.4
90°	0.0	3.4	8.2	7.0	7.0	7.0	8.2	3.4	0.0	3.4	8.2
92.5°	16.7	60.0	191.8	63.3	48.7	63.3	191.8	60.0	16.7	60.0	191.8
95°	48.7	148.5	661.1	235.8	145.0	235.8	661.1	148.5	48.7	148.5	661.1
97.5°	91.6	193.2	1122.2	683.4	417.1	683.4	1122.2	193.2	91.6	193.2	1122.2
100°	119.5	219.3	1295.7	1155.4	749.4	1155.4	1295.7	219.3	119.5	219.3	1295.7
102.5°	151.0	247.2	1274.4	1709.3	1299.7	1709.3	1274.4	247.2	151.0	247.2	1274.4
105°	199.5	288.0	1163.4	2222.1	2104.1	2222.1	1163.4	288.0	199.5	288.0	1163.4
107.5°	252.0	335.2	1058.1	2266.6	2391.6	2266.6	1058.1	335.2	252.0	335.2	1058.1
110°	290.0	365.9	1008.0	2211.3	2437.1	2211.3	1008.0	365.9	290.0	365.9	1008.0



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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°	321.5	396.6	976.5	2111.7	2402.7	2111.7	976.5	396.6	321.5	396.6	976.5
115°	368.8	440.3	947.7	1953.1	2297.8	1953.1	947.7	440.3	368.8	440.3	947.7
117.5°	417.6	482.0	936.5	1807.8	2151.0	1807.8	936.5	482.0	417.6	482.0	936.5
120°	445.4	508.9	933.7	1718.5	2050.8	1718.5	933.7	508.9	445.4	508.9	933.7
122.5°	472.3	534.9	934.7	1641.0	1950.5	1641.0	934.7	534.9	472.3	534.9	934.7
125°	512.7	571.6	934.9	1542.1	1817.7	1542.1	934.9	571.6	512.7	571.6	934.9
127.5°	547.3	607.6	934.7	1467.9	1697.8	1467.9	934.7	607.6	547.3	607.6	934.7
130°	569.5	630.8	933.7	1425.6	1630.9	1425.6	933.7	630.8	569.5	630.8	933.7
132.5°	589.0	653.0	932.8	1386.4	1578.9	1386.4	932.8	653.0	589.0	653.0	932.8
135°	619.4	684.1	930.3	1330.9	1501.0	1330.9	930.3	684.1	619.4	684.1	930.3
137.5°	649.1	714.2	927.8	1274.5	1425.6	1274.5	927.8	714.2	649.1	714.2	927.8
140°	670.5	732.8	926.8	1236.3	1379.1	1236.3	926.8	732.8	670.5	732.8	926.8
142.5°	690.8	750.5	926.8	1199.8	1327.3	1199.8	926.8	750.5	690.8	750.5	926.8
145°	723.8	777.1	928.0	1146.2	1255.0	1146.2	928.0	777.1	723.8	777.1	928.0
147.5°	755.9	802.1	929.6	1100.6	1184.7	1100.6	929.6	802.1	755.9	802.1	929.6
150°	777.2	818.0	931.4	1073.5	1144.9	1073.5	931.4	818.0	777.2	818.0	931.4
152.5°	798.5	832.1	932.3	1052.7	1109.6	1052.7	932.3	832.1	798.5	832.1	932.3
155°	825.9	853.1	933.7	1026.3	1064.8	1026.3	933.7	853.1	825.9	853.1	933.7
157.5°	851.9	871.4	935.1	1006.8	1033.7	1006.8	935.1	871.4	851.9	871.4	935.1
160°	867.6	883.5	936.1	994.6	1016.1	994.6	936.1	883.5	867.6	883.5	936.1
162.5°	881.5	893.9	936.1	984.3	1000.4	984.3	936.1	893.9	881.5	893.9	936.1
165°	901.3	909.2	936.1	971.1	982.4	971.1	936.1	909.2	901.3	909.2	936.1
167.5°	915.2	920.2	936.3	961.2	967.2	961.2	936.3	920.2	915.2	920.2	936.3
170°	924.5	926.7	937.2	954.7	956.9	954.7	937.2	926.7	924.5	926.7	937.2
172.5°	931.0	932.3	939.1	951.0	950.5	951.0	939.1	932.3	931.0	932.3	939.1
175°	939.5	939.5	939.5	946.4	944.2	946.4	939.5	939.5	939.5	939.5	939.5
177.5°	943.0	942.1	941.2	945.7	942.1	945.7	941.2	942.1	943.0	942.1	941.2
180°	943.0	943.0	943.0	943.0	943.0	943.0	943.0	943.0	943.0	943.0	943.0



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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°	8.2	8.2	6.8	8.4	10.0	6.8
90°	7.0	7.0	7.0	8.2	3.4	0.0
92.5°	63.3	48.7	63.3	191.8	60.0	16.7
95°	235.8	145.0	235.8	661.1	148.5	48.7
97.5°	683.4	417.1	683.4	1122.2	193.2	91.6
100°	1155.4	749.4	1155.4	1295.7	219.3	119.5
102.5°	1709.3	1299.7	1709.3	1274.4	247.2	151.0
105°	2222.1	2104.1	2222.1	1163.4	288.0	199.5
107.5°	2266.6	2391.6	2266.6	1058.1	335.2	252.0
110°	2211.3	2437.1	2211.3	1008.0	365.9	290.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2111.7	2402.7	2111.7	976.5	396.6	321.5
115°	1953.1	2297.8	1953.1	947.7	440.3	368.8
117.5°	1807.8	2151.0	1807.8	936.5	482.0	417.6
120°	1718.5	2050.8	1718.5	933.7	508.9	445.4
122.5°	1641.0	1950.5	1641.0	934.7	534.9	472.3
125°	1542.1	1817.7	1542.1	934.9	571.6	512.7
127.5°	1467.9	1697.8	1467.9	934.7	607.6	547.3
130°	1425.6	1630.9	1425.6	933.7	630.8	569.5
132.5°	1386.4	1578.9	1386.4	932.8	653.0	589.0
135°	1330.9	1501.0	1330.9	930.3	684.1	619.4
137.5°	1274.5	1425.6	1274.5	927.8	714.2	649.1
140°	1236.3	1379.1	1236.3	926.8	732.8	670.5
142.5°	1199.8	1327.3	1199.8	926.8	750.5	690.8
145°	1146.2	1255.0	1146.2	928.0	777.1	723.8
147.5°	1100.6	1184.7	1100.6	929.6	802.1	755.9
150°	1073.5	1144.9	1073.5	931.4	818.0	777.2
152.5°	1052.7	1109.6	1052.7	932.3	832.1	798.5
155°	1026.3	1064.8	1026.3	933.7	853.1	825.9
157.5°	1006.8	1033.7	1006.8	935.1	871.4	851.9
160°	994.6	1016.1	994.6	936.1	883.5	867.6
162.5°	984.3	1000.4	984.3	936.1	893.9	881.5
165°	971.1	982.4	971.1	936.1	909.2	901.3
167.5°	961.2	967.2	961.2	936.3	920.2	915.2
170°	954.7	956.9	954.7	937.2	926.7	924.5
172.5°	951.0	950.5	951.0	939.1	932.3	931.0
175°	946.4	944.2	946.4	939.5	939.5	939.5
177.5°	945.7	942.1	945.7	941.2	942.1	943.0
180°	943.0	943.0	943.0	943.0	943.0	943.0



TEST NUMBER: P855444

CATALOG NUMBER: SQ2-FA-125U-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	10.86	11.54	11.95	12.61	14.08	9.71	10.39	10.80	11.47	12.94
	3H	11.55	12.16	12.65	13.24	14.73	15.86	16.47	16.95	17.55	19.03
	4H	11.95	12.53	13.06	13.62	15.11	17.13	17.70	18.23	18.79	20.28
	6H	12.30	12.83	13.42	13.92	15.42	17.73	18.26	18.84	19.35	20.85
	8H	12.42	12.92	13.53	14.02	15.52	17.85	18.35	18.97	19.46	20.95
	12H	12.48	12.96	13.61	14.06	15.58	17.88	18.36	19.00	19.46	20.98
4H	2H	11.24	11.82	12.35	12.90	14.39	10.23	10.81	11.35	11.89	13.39
	3H	12.23	12.71	13.34	13.82	15.32	16.55	17.03	17.67	18.14	19.64
	4H	12.78	13.23	13.90	14.33	15.85	17.99	18.44	19.11	19.54	21.06
	6H	13.25	13.63	14.38	14.76	16.27	18.73	19.10	19.85	20.23	21.74
	8H	13.42	13.78	14.55	14.89	16.42	18.89	19.24	20.02	20.36	21.89
	12H	13.53	13.85	14.67	14.98	16.51	18.95	19.27	20.09	20.39	21.93
8H	4H	13.88	14.23	15.00	15.35	16.88	18.11	18.46	19.24	19.58	21.11
	6H	14.48	14.77	15.63	15.93	17.46	18.99	19.28	20.13	20.43	21.96
	8H	14.72	14.97	15.87	16.11	17.66	19.24	19.49	20.39	20.63	22.18
	12H	14.88	15.11	16.04	16.24	17.82	19.35	19.57	20.51	20.71	22.29
12H	4H	14.02	14.33	15.16	15.46	17.00	18.07	18.38	19.21	19.51	21.05
	6H	14.76	15.01	15.91	16.15	17.70	19.00	19.25	20.15	20.39	21.94
	8H	15.05	15.27	16.21	16.41	17.99	19.27	19.49	20.43	20.63	22.21