

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: P854981

Luminaire Tested: SQ2-FA-125U-075D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854981
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-830-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

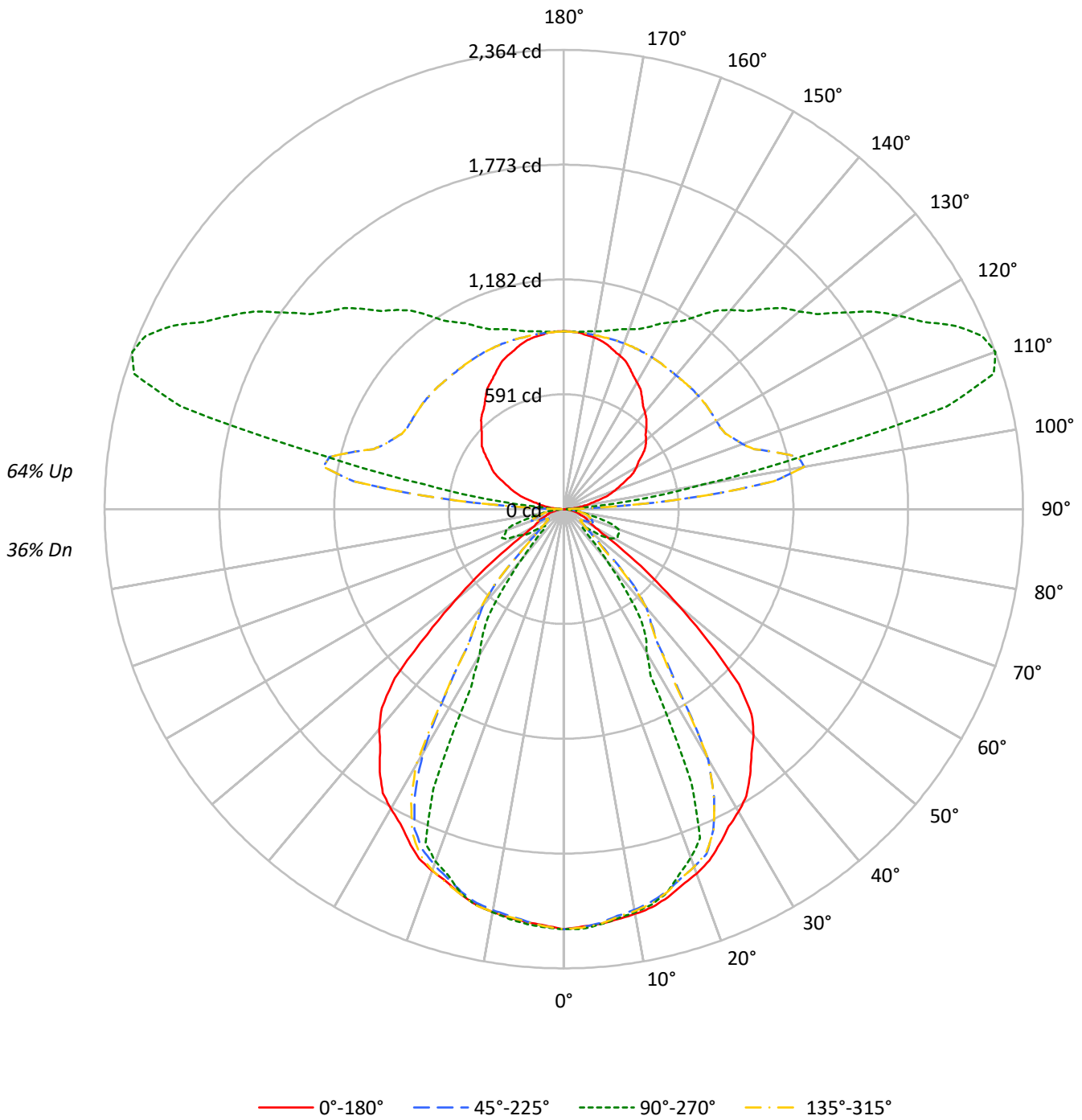
Lumens per Lamp: N/A
Luminaire Lumens: 8804.4 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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

TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-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	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°	34920	34920	34920	34920
5°	34734	34788	34603	34762
10°	34682	34549	34549	34549
15°	34571	34215	34298	34215
20°	34302	32845	34050	33154
25°	33852	27720	33620	28303
30°	33542	15905	33176	16117
35°	32952	13663	32534	13470
40°	32039	7185	31147	7116
45°	29124	3089	28081	3089
50°	19216	3730	18231	3481
55°	10745	6888	10193	6244
60°	5793	9691	5690	8690
65°	5112	11775	5360	13398
70°	4773	14091	4541	14861
75°	4479	12108	4579	12514
80°	3794	8638	3794	9103
85°	3335	4835	3020	5743

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 29124 cd/sqm



TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.5	2.3
10°-20°	577.4	6.6
20°-30°	787.3	8.9
30°-40°	661.6	7.5
40°-50°	375.8	4.3
50°-60°	199.4	2.3
60°-70°	183.6	2.1
70°-80°	134.8	1.5
80°-90°	36.2	0.4
90°-100°	350.0	4.0
100°-110°	1139.4	12.9
110°-120°	1127.1	12.8
120°-130°	921.1	10.5
130°-140°	752.8	8.6
140°-150°	586.4	6.7
150°-160°	422.6	4.8
160°-170°	258.3	2.9
170°-180°	87.2	1.0
0°-30°	1568.2	17.8
0°-40°	2229.8	25.3
0°-60°	2805.0	31.9
0°-90°	3159.6	35.9
90°-120°	2616.5	29.7
90°-150°	4876.7	55.4
90°-180°	5645.0	64.1
0°-180°	8804.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2163	2163	2163	2163	2163	
5°	2143	2146	2135	2145	2143	204
15°	2068	2047	2052	2047	2068	583
25°	1900	1556	1887	1589	1900	876
35°	1672	693	1651	683	1672	1044
45°	1276	135	1230	135	1276	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°	47	141	47	141	47	55
105°	194	2041	194	2041	194	206
115°	358	2229	358	2229	358	354
125°	497	1764	497	1764	497	443
135°	601	1456	601	1456	601	464
145°	702	1218	702	1218	702	440
155°	801	1033	801	1033	801	369
165°	874	953	874	953	874	246
175°	912	916	912	916	912	86
180°	915	915	915	915	915	



TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8
2.5°	2151.0	2182.9	2154.9	2151.3	2162.8	2160.2	2156.2	2171.3	2145.8	2171.3	2151.0
5°	2143.1	2179.9	2138.3	2127.3	2146.4	2133.6	2144.8	2166.9	2135.0	2163.7	2131.7
7.5°	2129.8	2162.4	2112.5	2105.5	2124.3	2113.1	2117.7	2148.4	2121.7	2140.5	2111.6
10°	2115.4	2144.2	2094.3	2089.8	2107.3	2096.1	2100.7	2132.8	2107.3	2124.8	2095.9
12.5°	2099.8	2122.1	2072.1	2070.1	2085.1	2077.8	2079.9	2106.8	2086.4	2104.0	2076.3
15°	2068.2	2088.9	2038.8	2031.0	2046.9	2040.6	2043.8	2067.8	2051.9	2063.0	2038.8
17.5°	2029.1	2045.6	1995.7	1972.3	1972.9	1980.9	1995.7	2024.8	2010.4	2025.1	1990.8
20°	1996.4	2015.5	1960.5	1914.7	1911.6	1919.6	1960.5	1989.7	1981.7	1997.6	1949.1
22.5°	1958.5	1971.3	1921.4	1844.1	1833.3	1841.3	1916.1	1950.7	1947.8	1958.6	1898.2
25°	1900.2	1912.9	1821.9	1710.7	1556.0	1701.2	1825.1	1887.2	1887.2	1896.7	1816.9
27.5°	1840.8	1841.1	1676.4	1098.6	969.2	1059.1	1674.1	1808.6	1823.8	1819.1	1662.4
30°	1799.1	1787.9	1485.9	888.1	853.1	875.3	1487.5	1754.0	1779.5	1761.9	1448.4
32.5°	1750.8	1719.1	1097.1	816.6	787.8	807.6	1060.9	1689.2	1733.8	1695.9	1139.1
35°	1671.8	1588.9	836.7	721.9	693.2	718.7	830.2	1561.3	1650.6	1548.5	864.5
37.5°	1586.6	1262.9	736.6	575.0	513.1	562.6	733.0	1249.4	1552.1	1220.4	735.9
40°	1520.1	992.3	662.2	420.6	340.9	396.7	657.4	946.7	1477.8	1018.4	645.9
42.5°	1431.4	871.6	531.7	267.2	209.1	244.6	509.9	851.5	1386.4	882.5	514.1
45°	1275.5	749.2	314.8	146.5	135.3	141.8	290.3	735.4	1229.8	719.4	321.3
47.5°	1010.2	571.4	202.3	124.6	136.7	124.6	196.1	553.2	954.1	552.3	201.9
50°	765.0	446.0	156.6	126.1	148.5	126.1	151.7	430.8	725.8	470.7	154.9
52.5°	566.7	372.7	127.9	138.3	178.4	140.8	124.3	362.8	538.0	379.7	121.0
55°	381.7	292.4	102.8	182.5	244.7	187.2	102.8	283.9	362.1	280.7	99.5
57.5°	242.1	217.5	104.0	234.6	279.3	239.0	105.7	209.6	232.2	210.5	91.4
60°	179.4	171.4	115.8	249.1	300.1	252.2	117.5	165.0	176.2	163.4	97.9
62.5°	148.1	135.0	139.3	269.8	311.8	262.8	142.2	128.8	154.0	123.4	108.3
65°	133.8	87.5	164.7	273.2	308.2	273.2	166.3	82.9	140.3	89.2	146.8
67.5°	120.8	64.9	159.2	271.4	310.2	271.9	155.2	61.8	115.8	60.3	150.0
70°	101.1	58.1	150.0	276.1	298.5	266.6	150.0	56.3	96.2	54.7	176.2
72.5°	84.1	55.2	139.6	255.0	264.6	245.5	140.9	54.8	84.5	49.4	165.8
75°	71.8	54.3	133.8	203.6	194.1	194.1	130.5	52.7	73.4	49.5	128.9
77.5°	53.8	48.1	110.9	133.0	125.6	125.6	109.0	46.5	51.2	43.5	104.7
80°	40.8	44.0	91.4	97.8	92.9	92.9	88.1	42.4	40.8	40.8	86.5
82.5°	31.7	37.4	70.4	71.7	68.2	66.9	68.5	37.1	31.7	34.1	66.8
85°	18.0	25.9	37.5	30.9	26.1	24.5	35.8	24.3	16.3	24.3	35.8
87.5°	6.6	12.3	6.8	6.6	6.6	6.6	6.8	12.3	6.6	11.0	8.1
90°	0.0	3.3	7.9	6.8	6.8	6.8	7.9	3.3	0.0	3.3	7.9
92.5°	16.2	58.2	186.1	61.4	47.3	61.4	186.1	58.2	16.2	58.2	186.1
95°	47.3	144.0	641.4	228.7	140.7	228.7	641.4	144.0	47.3	144.0	641.4
97.5°	88.9	187.5	1088.7	663.0	404.7	663.0	1088.7	187.5	88.9	187.5	1088.7
100°	115.9	212.8	1257.0	1120.9	727.0	1120.9	1257.0	212.8	115.9	212.8	1257.0
102.5°	146.5	239.8	1236.4	1658.3	1260.9	1658.3	1236.4	239.8	146.5	239.8	1236.4
105°	193.6	279.4	1128.7	2155.8	2041.4	2155.8	1128.7	279.4	193.6	279.4	1128.7
107.5°	244.4	325.2	1026.5	2199.0	2320.3	2199.0	1026.5	325.2	244.4	325.2	1026.5
110°	281.3	355.0	977.9	2145.4	2364.4	2145.4	977.9	355.0	281.3	355.0	977.9



TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-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°	311.9	384.8	947.4	2048.7	2331.0	2048.7	947.4	384.8	311.9	384.8	947.4
115°	357.8	427.2	919.4	1894.8	2229.3	1894.8	919.4	427.2	357.8	427.2	919.4
117.5°	405.1	467.6	908.6	1753.9	2086.8	1753.9	908.6	467.6	405.1	467.6	908.6
120°	432.1	493.8	905.9	1667.2	1989.6	1667.2	905.9	493.8	432.1	493.8	905.9
122.5°	458.2	519.0	906.8	1592.1	1892.4	1592.1	906.8	519.0	458.2	519.0	906.8
125°	497.4	554.6	907.0	1496.1	1763.5	1496.1	907.0	554.6	497.4	554.6	907.0
127.5°	530.9	589.5	906.8	1424.2	1647.1	1424.2	906.8	589.5	530.9	589.5	906.8
130°	552.5	612.0	905.9	1383.1	1582.2	1383.1	905.9	612.0	552.5	612.0	905.9
132.5°	571.4	633.5	905.0	1345.0	1531.8	1345.0	905.0	633.5	571.4	633.5	905.0
135°	600.9	663.7	902.6	1291.2	1456.3	1291.2	902.6	663.7	600.9	663.7	902.6
137.5°	629.8	692.9	900.1	1236.5	1383.1	1236.5	900.1	692.9	629.8	692.9	900.1
140°	650.5	710.9	899.2	1199.4	1338.0	1199.4	899.2	710.9	650.5	710.9	899.2
142.5°	670.2	728.1	899.2	1164.0	1287.7	1164.0	899.2	728.1	670.2	728.1	899.2
145°	702.2	753.9	900.3	1112.0	1217.6	1112.0	900.3	753.9	702.2	753.9	900.3
147.5°	733.3	778.2	901.9	1067.8	1149.4	1067.8	901.9	778.2	733.3	778.2	901.9
150°	754.0	793.6	903.6	1041.4	1110.7	1041.4	903.6	793.6	754.0	793.6	903.6
152.5°	774.7	807.3	904.5	1021.3	1076.5	1021.3	904.5	807.3	774.7	807.3	904.5
155°	801.3	827.6	905.9	995.6	1033.1	995.6	905.9	827.6	801.3	827.6	905.9
157.5°	826.5	845.4	907.2	976.8	1002.9	976.8	907.2	845.4	826.5	845.4	907.2
160°	841.8	857.1	908.1	964.9	985.8	964.9	908.1	857.1	841.8	857.1	908.1
162.5°	855.2	867.2	908.1	954.9	970.5	954.9	908.1	867.2	855.2	867.2	908.1
165°	874.4	882.1	908.1	942.2	953.1	942.2	908.1	882.1	874.4	882.1	908.1
167.5°	887.9	892.8	908.4	932.6	938.3	932.6	908.4	892.8	887.9	892.8	908.4
170°	896.9	899.1	909.3	926.2	928.4	926.2	909.3	899.1	896.9	899.1	909.3
172.5°	903.3	904.5	911.1	922.6	922.2	922.6	911.1	904.5	903.3	904.5	911.1
175°	911.5	911.5	911.5	918.2	916.0	918.2	911.5	911.5	911.5	911.5	911.5
177.5°	914.9	914.0	913.1	917.5	914.0	917.5	913.1	914.0	914.9	914.0	913.1
180°	914.9	914.9	914.9	914.9	914.9	914.9	914.9	914.9	914.9	914.9	914.9



TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8
2.5°	2146.0	2154.9	2154.9	2149.7	2175.2	2151.0
5°	2124.1	2144.8	2135.2	2135.0	2167.1	2143.1
7.5°	2108.8	2128.2	2119.3	2117.5	2148.9	2129.8
10°	2092.9	2107.3	2101.0	2105.7	2134.7	2115.4
12.5°	2070.8	2087.7	2081.4	2088.7	2115.1	2099.8
15°	2032.6	2046.9	2050.2	2053.5	2084.1	2068.2
17.5°	1969.5	1976.5	1992.4	2015.0	2046.9	2029.1
20°	1919.9	1929.6	1939.1	1978.4	2015.5	1996.4
22.5°	1863.5	1860.4	1882.7	1928.9	1975.1	1958.5
25°	1711.5	1588.7	1724.2	1843.1	1904.9	1900.2
27.5°	1191.7	1034.1	1173.5	1701.2	1831.2	1840.8
30°	937.9	864.5	936.2	1518.5	1776.7	1799.1
32.5°	832.6	782.3	825.9	1155.7	1708.1	1750.8
35°	718.5	683.4	718.5	864.5	1573.0	1671.8
37.5°	575.2	503.4	573.8	747.0	1271.5	1586.6
40°	428.5	337.6	415.7	668.8	1016.2	1520.1
42.5°	285.5	217.5	270.2	526.5	879.0	1431.4
45°	154.6	135.3	148.1	318.0	717.3	1275.5
47.5°	121.2	128.2	121.2	200.6	548.7	1010.2
50°	116.3	138.6	116.3	154.9	454.0	765.0
52.5°	126.7	150.4	125.5	122.3	370.5	566.7
55°	143.7	221.8	145.3	99.5	271.6	381.7
57.5°	204.5	249.5	206.8	94.3	209.2	242.1
60°	210.1	269.1	208.5	99.5	161.9	179.4
62.5°	248.5	333.1	248.2	113.9	120.3	148.1
65°	318.7	350.7	322.0	145.2	85.9	133.8
67.5°	302.6	325.3	299.4	155.6	59.1	120.8
70°	297.2	314.8	294.1	177.7	54.8	101.1
72.5°	277.3	279.6	271.6	164.7	49.4	84.1
75°	214.9	200.6	207.0	141.9	49.4	71.8
77.5°	133.6	127.9	128.8	108.3	43.6	53.8
80°	101.1	97.9	96.2	91.4	40.8	40.8
82.5°	75.0	71.8	70.2	70.4	34.1	31.7
85°	34.1	31.0	29.4	40.8	24.3	18.0
87.5°	7.9	7.9	6.6	8.1	9.7	6.6
90°	6.8	6.8	6.8	7.9	3.3	0.0
92.5°	61.4	47.3	61.4	186.1	58.2	16.2
95°	228.7	140.7	228.7	641.4	144.0	47.3
97.5°	663.0	404.7	663.0	1088.7	187.5	88.9
100°	1120.9	727.0	1120.9	1257.0	212.8	115.9
102.5°	1658.3	1260.9	1658.3	1236.4	239.8	146.5
105°	2155.8	2041.4	2155.8	1128.7	279.4	193.6
107.5°	2199.0	2320.3	2199.0	1026.5	325.2	244.4
110°	2145.4	2364.4	2145.4	977.9	355.0	281.3



TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-830-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2048.7	2331.0	2048.7	947.4	384.8	311.9
115°	1894.8	2229.3	1894.8	919.4	427.2	357.8
117.5°	1753.9	2086.8	1753.9	908.6	467.6	405.1
120°	1667.2	1989.6	1667.2	905.9	493.8	432.1
122.5°	1592.1	1892.4	1592.1	906.8	519.0	458.2
125°	1496.1	1763.5	1496.1	907.0	554.6	497.4
127.5°	1424.2	1647.1	1424.2	906.8	589.5	530.9
130°	1383.1	1582.2	1383.1	905.9	612.0	552.5
132.5°	1345.0	1531.8	1345.0	905.0	633.5	571.4
135°	1291.2	1456.3	1291.2	902.6	663.7	600.9
137.5°	1236.5	1383.1	1236.5	900.1	692.9	629.8
140°	1199.4	1338.0	1199.4	899.2	710.9	650.5
142.5°	1164.0	1287.7	1164.0	899.2	728.1	670.2
145°	1112.0	1217.6	1112.0	900.3	753.9	702.2
147.5°	1067.8	1149.4	1067.8	901.9	778.2	733.3
150°	1041.4	1110.7	1041.4	903.6	793.6	754.0
152.5°	1021.3	1076.5	1021.3	904.5	807.3	774.7
155°	995.6	1033.1	995.6	905.9	827.6	801.3
157.5°	976.8	1002.9	976.8	907.2	845.4	826.5
160°	964.9	985.8	964.9	908.1	857.1	841.8
162.5°	954.9	970.5	954.9	908.1	867.2	855.2
165°	942.2	953.1	942.2	908.1	882.1	874.4
167.5°	932.6	938.3	932.6	908.4	892.8	887.9
170°	926.2	928.4	926.2	909.3	899.1	896.9
172.5°	922.6	922.2	922.6	911.1	904.5	903.3
175°	918.2	916.0	918.2	911.5	911.5	911.5
177.5°	917.5	914.0	917.5	913.1	914.0	914.9
180°	914.9	914.9	914.9	914.9	914.9	914.9



TEST NUMBER: P854981

CATALOG NUMBER: SQ2-FA-125U-075D-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	10.75	11.43	11.84	12.51	13.97	9.61	10.29	10.70	11.36	12.83
	3H	11.44	12.05	12.54	13.14	14.62	15.75	16.36	16.85	17.45	18.93
	4H	11.85	12.43	12.95	13.51	15.00	17.02	17.60	18.13	18.68	20.18
	6H	12.20	12.73	13.31	13.82	15.32	17.62	18.15	18.74	19.24	20.74
	8H	12.31	12.82	13.43	13.92	15.41	17.74	18.25	18.86	19.35	20.85
	12H	12.38	12.86	13.50	13.95	15.47	17.78	18.26	18.90	19.35	20.87
4H	2H	11.13	11.71	12.25	12.80	14.29	10.13	10.71	11.24	11.79	13.28
	3H	12.12	12.60	13.24	13.71	15.22	16.44	16.93	17.56	18.04	19.54
	4H	12.68	13.12	13.80	14.22	15.75	17.89	18.33	19.01	19.43	20.96
	6H	13.15	13.53	14.28	14.65	16.17	18.62	19.00	19.75	20.12	21.64
	8H	13.32	13.67	14.45	14.79	16.32	18.79	19.14	19.91	20.26	21.79
	12H	13.43	13.75	14.57	14.88	16.41	18.84	19.16	19.98	20.29	21.82
8H	4H	13.77	14.13	14.90	15.24	16.77	18.01	18.36	19.13	19.47	21.00
	6H	14.38	14.67	15.52	15.83	17.35	18.88	19.17	20.03	20.33	21.86
	8H	14.61	14.87	15.77	16.00	17.55	19.13	19.39	20.29	20.52	22.07
	12H	14.78	15.00	15.93	16.13	17.72	19.25	19.47	20.40	20.60	22.19
12H	4H	13.91	14.23	15.05	15.36	16.89	17.96	18.28	19.10	19.41	20.94
	6H	14.65	14.91	15.81	16.04	17.59	18.89	19.14	20.04	20.28	21.83
	8H	14.95	15.17	16.10	16.30	17.89	19.17	19.39	20.32	20.52	22.11