

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: P853793

Luminaire Tested: SQ2-FA-100U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853793
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-940-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

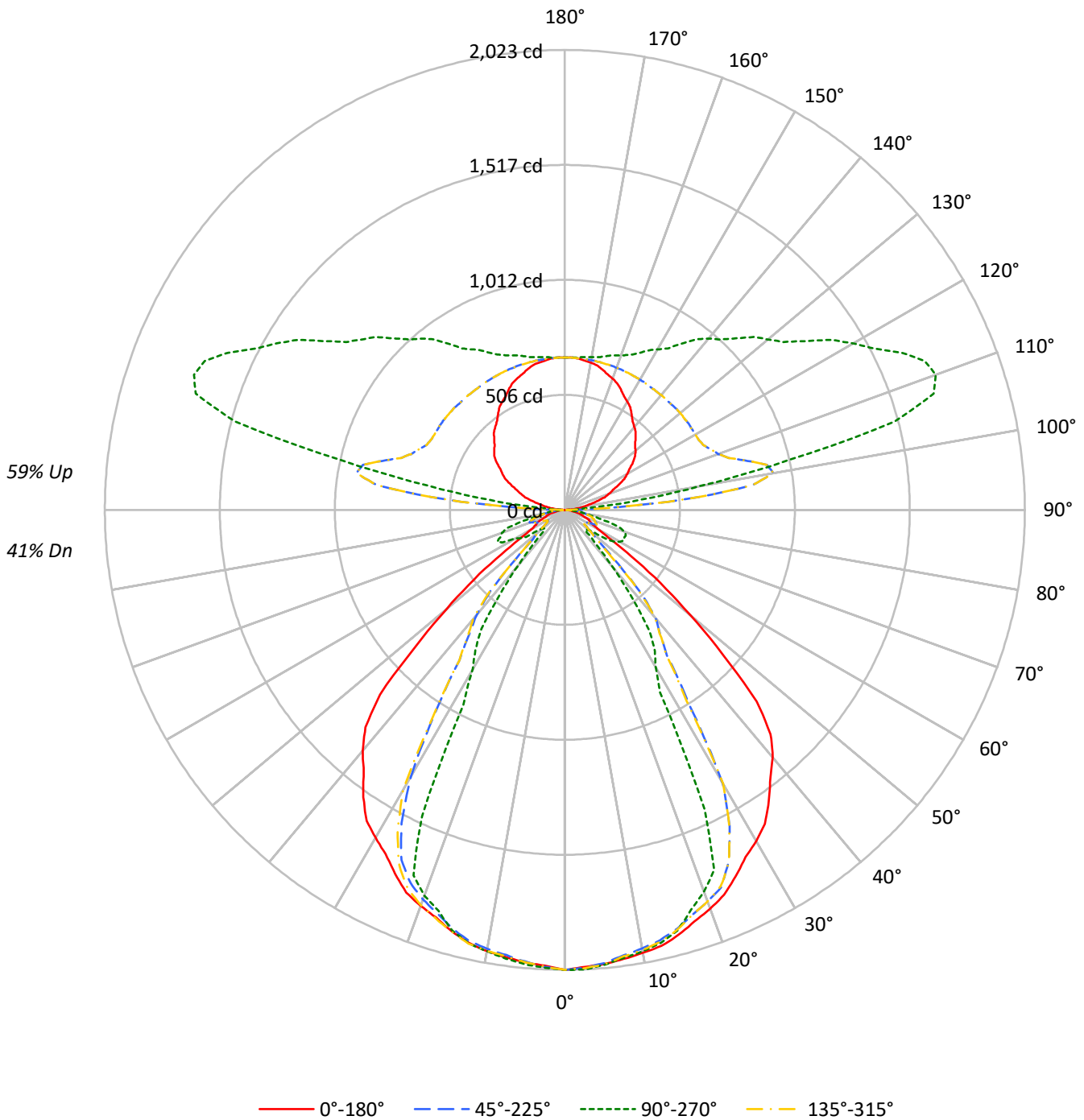
Lumens per Lamp: N/A
Luminaire Lumens: 7129.4 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-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°	32669	32669	32669	32669
5°	32496	32546	32373	32522
10°	32447	32323	32323	32323
15°	32343	32010	32087	32010
20°	32091	30728	31856	31017
25°	31670	25933	31452	26477
30°	31379	14879	31038	15077
35°	30829	12782	30437	12603
40°	29973	6721	29139	6658
45°	27247	2893	26270	2893
50°	17977	3489	17055	3258
55°	10052	6443	9537	5841
60°	5422	9068	5322	8131
65°	4779	11018	5012	12535
70°	4466	13180	4249	13903
75°	4186	11329	4286	11709
80°	3543	8089	3543	8517
85°	3112	4520	2834	5372

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 27247 cd/sqm



TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.4	2.7
10°-20°	540.2	7.6
20°-30°	736.5	10.3
30°-40°	619.0	8.7
40°-50°	351.6	4.9
50°-60°	186.5	2.6
60°-70°	171.7	2.4
70°-80°	126.1	1.8
80°-90°	34.1	0.5
90°-100°	280.0	3.9
100°-110°	847.0	11.9
110°-120°	826.8	11.6
120°-130°	675.6	9.5
130°-140°	551.5	7.7
140°-150°	429.3	6.0
150°-160°	309.5	4.3
160°-170°	189.5	2.7
170°-180°	64.0	0.9
0°-30°	1467.1	20.6
0°-40°	2086.1	29.3
0°-60°	2624.2	36.8
0°-90°	2956.1	41.5
90°-120°	1953.8	27.4
90°-150°	3610.3	50.6
90°-180°	4173.0	58.5
0°-180°	7129.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2023	2023	2023	2023	2023	
5°	2005	2008	1997	2007	2005	191
15°	1935	1915	1920	1915	1935	545
25°	1778	1456	1766	1486	1778	820
35°	1564	648	1544	639	1564	976
45°	1193	127	1150	127	1193	872
55°	357	229	339	208	357	344
65°	125	288	131	328	125	126
75°	67	182	69	188	67	69
85°	17	24	15	29	17	19
90°	0	6	0	6	0	2
95°	35	123	35	123	35	41
105°	147	1501	147	1501	147	155
115°	262	1635	262	1635	262	259
125°	366	1294	366	1294	366	325
135°	439	1066	439	1066	439	340
145°	513	892	513	892	513	321
155°	584	759	584	759	584	269
165°	639	700	639	700	639	180
175°	668	673	668	673	668	63
180°	670	670	670	670	670	



TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4
2.5°	2012.4	2042.2	2016.0	2012.6	2023.4	2021.0	2017.3	2031.4	2007.5	2031.4	2012.4
5°	2005.0	2039.4	2000.5	1990.2	2008.1	1996.2	2006.6	2027.3	1997.4	2024.3	1994.4
7.5°	1992.5	2023.0	1976.4	1969.7	1987.3	1976.9	1981.2	2010.0	1984.9	2002.5	1975.4
10°	1979.1	2006.0	1959.3	1955.1	1971.5	1961.0	1965.4	1995.3	1971.5	1987.9	1960.8
12.5°	1964.5	1985.3	1938.5	1936.7	1950.7	1943.9	1945.8	1971.0	1951.9	1968.4	1942.5
15°	1934.9	1954.3	1907.4	1900.1	1915.0	1909.1	1912.0	1934.5	1919.6	1930.0	1907.4
17.5°	1898.2	1913.8	1867.1	1845.1	1845.7	1853.2	1867.1	1894.3	1880.8	1894.6	1862.5
20°	1867.7	1885.6	1834.1	1791.4	1788.4	1795.8	1834.1	1861.4	1854.0	1868.9	1823.5
22.5°	1832.3	1844.3	1797.5	1725.3	1715.1	1722.6	1792.6	1824.9	1822.2	1832.4	1775.9
25°	1777.7	1789.6	1704.4	1600.4	1455.7	1591.5	1707.5	1765.5	1765.5	1774.4	1699.9
27.5°	1722.1	1722.4	1568.3	1027.8	906.7	990.8	1566.2	1692.0	1706.3	1701.8	1555.2
30°	1683.1	1672.6	1390.1	830.9	798.1	818.9	1391.6	1640.9	1664.8	1648.4	1355.0
32.5°	1637.9	1608.4	1026.3	763.9	737.0	755.5	992.5	1580.3	1622.0	1586.5	1065.7
35°	1564.1	1486.5	782.8	675.4	648.5	672.4	776.7	1460.7	1544.2	1448.7	808.7
37.5°	1484.4	1181.5	689.1	537.9	480.1	526.3	685.7	1168.9	1452.1	1141.7	688.5
40°	1422.1	928.3	619.5	393.5	318.9	371.1	614.9	885.6	1382.5	952.8	604.3
42.5°	1339.1	815.4	497.4	249.9	195.6	228.7	477.0	796.6	1297.0	825.6	481.0
45°	1193.3	700.9	294.5	137.1	126.7	132.6	271.6	688.0	1150.5	673.1	300.6
47.5°	945.1	534.6	189.2	116.5	127.9	116.5	183.4	517.6	892.7	516.7	188.9
50°	715.7	417.3	146.5	118.0	138.9	118.0	141.9	403.0	679.0	440.3	145.0
52.5°	530.1	348.7	119.6	129.3	166.9	131.7	116.3	339.4	503.2	355.2	113.2
55°	357.1	273.5	96.1	170.7	228.9	175.2	96.1	265.6	338.8	262.7	93.1
57.5°	226.4	203.5	97.4	219.5	261.2	223.6	98.9	196.1	217.3	197.0	85.5
60°	167.9	160.4	108.3	233.0	280.8	236.0	109.9	154.4	164.8	152.9	91.6
62.5°	138.6	126.3	130.3	252.4	291.8	245.8	133.1	120.5	144.0	115.4	101.3
65°	125.1	81.9	154.1	255.6	288.4	255.6	155.6	77.5	131.2	83.5	137.3
67.5°	112.9	60.7	148.9	253.8	290.2	254.4	145.3	57.9	108.3	56.4	140.4
70°	94.6	54.3	140.4	258.4	279.2	249.4	140.4	52.7	90.0	51.2	164.8
72.5°	78.7	51.6	130.6	238.6	247.5	229.6	131.8	51.3	79.0	46.2	155.0
75°	67.1	50.7	125.1	190.5	181.6	181.6	122.1	49.3	68.7	46.3	120.5
77.5°	50.4	45.0	103.8	124.4	117.5	117.5	101.9	43.4	47.9	40.8	98.0
80°	38.1	41.1	85.5	91.5	87.0	87.0	82.4	39.6	38.1	38.1	80.9
82.5°	29.6	35.0	65.9	67.1	63.8	62.6	64.1	34.7	29.6	32.0	62.6
85°	16.8	24.2	35.1	28.9	24.4	22.9	33.6	22.7	15.3	22.7	33.6
87.5°	6.1	11.3	7.4	6.4	6.1	6.4	7.4	11.3	6.1	10.1	8.6
90°	0.0	2.1	12.6	7.3	6.3	7.3	12.6	2.1	0.0	2.1	12.6
92.5°	11.8	47.6	171.0	56.7	40.8	56.7	171.0	47.6	11.8	47.6	171.0
95°	34.7	109.9	528.4	195.2	123.2	195.2	528.4	109.9	34.7	109.9	528.4
97.5°	67.2	139.8	832.9	551.1	335.6	551.1	832.9	139.8	67.2	139.8	832.9
100°	87.4	158.4	930.6	899.6	604.2	899.6	930.6	158.4	87.4	158.4	930.6
102.5°	110.1	178.7	910.3	1261.8	1005.9	1261.8	910.3	178.7	110.1	178.7	910.3
105°	147.4	207.1	831.6	1579.3	1501.1	1579.3	831.6	207.1	147.4	207.1	831.6
107.5°	182.7	239.8	755.8	1610.7	1701.3	1610.7	755.8	239.8	182.7	239.8	755.8
110°	206.3	260.9	717.9	1571.2	1735.8	1571.2	717.9	260.9	206.3	260.9	717.9



TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-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°	229.1	282.0	695.2	1504.8	1713.1	1504.8	695.2	282.0	229.1	282.0	695.2
115°	262.1	312.5	672.7	1391.9	1634.8	1391.9	672.7	312.5	262.1	312.5	672.7
117.5°	295.0	342.7	664.7	1286.1	1534.8	1286.1	664.7	342.7	295.0	342.7	664.7
120°	316.9	362.1	662.1	1224.4	1463.2	1224.4	662.1	362.1	316.9	362.1	662.1
122.5°	337.1	379.9	662.1	1170.1	1390.8	1170.1	662.1	379.9	337.1	379.9	662.1
125°	366.3	406.5	663.2	1099.2	1293.7	1099.2	663.2	406.5	366.3	406.5	663.2
127.5°	390.1	431.7	662.1	1045.7	1211.6	1045.7	662.1	431.7	390.1	431.7	662.1
130°	405.3	448.5	662.1	1015.0	1165.3	1015.0	662.1	448.5	405.3	448.5	662.1
132.5°	418.8	462.8	661.3	987.0	1125.7	987.0	661.3	462.8	418.8	462.8	661.3
135°	439.0	485.3	659.0	948.0	1066.3	948.0	659.0	485.3	439.0	485.3	659.0
137.5°	461.5	505.5	659.0	906.3	1016.0	906.3	659.0	505.5	461.5	505.5	659.0
140°	475.8	519.0	659.0	879.2	983.2	879.2	659.0	519.0	475.8	519.0	659.0
142.5°	490.1	531.7	658.1	854.5	945.3	854.5	658.1	531.7	490.1	531.7	658.1
145°	512.6	550.7	659.0	815.4	891.6	815.4	659.0	550.7	512.6	550.7	659.0
147.5°	535.2	567.5	660.2	783.2	841.7	783.2	660.2	567.5	535.2	567.5	660.2
150°	549.5	579.3	661.1	765.4	814.8	765.4	661.1	579.3	549.5	579.3	661.1
152.5°	563.0	589.5	661.9	750.0	790.3	750.0	661.9	589.5	563.0	589.5	661.9
155°	584.2	603.8	663.2	731.2	759.0	731.2	663.2	603.8	584.2	603.8	663.2
157.5°	602.8	618.6	664.4	717.3	736.7	717.3	664.4	618.6	602.8	618.6	664.4
160°	613.7	627.1	665.3	708.8	723.2	708.8	665.3	627.1	613.7	627.1	665.3
162.5°	624.7	634.7	666.1	701.1	713.1	701.1	666.1	634.7	624.7	634.7	666.1
165°	639.0	646.2	666.3	691.8	700.0	691.8	666.3	646.2	639.0	646.2	666.3
167.5°	651.2	654.9	667.6	684.5	688.0	684.5	667.6	654.9	651.2	654.9	667.6
170°	657.9	660.0	668.4	681.1	682.1	681.1	668.4	660.0	657.9	660.0	668.4
172.5°	662.1	663.4	668.4	677.7	677.9	677.7	668.4	663.4	662.1	663.4	668.4
175°	668.4	668.4	669.5	674.7	672.7	674.7	669.5	668.4	668.4	668.4	669.5
177.5°	671.4	670.6	669.7	672.2	670.5	672.2	669.7	670.6	671.4	670.6	669.7
180°	670.5	670.5	670.5	670.5	670.5	670.5	670.5	670.5	670.5	670.5	670.5



TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2023.4	2023.4	2023.4	2023.4	2023.4	2023.4
2.5°	2007.7	2016.0	2016.0	2011.2	2035.1	2012.4
5°	1987.2	2006.6	1997.6	1997.4	2027.4	2005.0
7.5°	1972.8	1991.0	1982.7	1980.9	2010.4	1992.5
10°	1958.0	1971.5	1965.5	1970.0	1997.0	1979.1
12.5°	1937.4	1953.2	1947.2	1954.1	1978.8	1964.5
15°	1901.6	1915.0	1918.0	1921.1	1949.8	1934.9
17.5°	1842.5	1849.1	1864.0	1885.1	1914.9	1898.2
20°	1796.2	1805.2	1814.1	1850.9	1885.6	1867.7
22.5°	1743.4	1740.5	1761.3	1804.5	1847.8	1832.3
25°	1601.1	1486.2	1613.1	1724.3	1782.2	1777.7
27.5°	1114.8	967.4	1097.8	1591.5	1713.2	1722.1
30°	877.4	808.7	875.9	1420.6	1662.2	1683.1
32.5°	779.0	731.8	772.7	1081.3	1597.9	1637.9
35°	672.2	639.4	672.2	808.7	1471.6	1564.1
37.5°	538.0	470.9	536.8	698.9	1189.6	1484.4
40°	400.9	315.9	389.0	625.6	950.7	1422.1
42.5°	267.1	203.6	252.8	492.6	822.3	1339.1
45°	144.6	126.7	138.6	297.6	671.1	1193.3
47.5°	113.4	119.9	113.4	187.7	513.4	945.1
50°	108.8	129.7	108.8	145.0	424.7	715.7
52.5°	118.6	140.7	117.4	114.4	346.6	530.1
55°	134.4	207.5	135.9	93.1	254.1	357.1
57.5°	191.4	233.5	193.5	88.2	195.7	226.4
60°	196.6	251.8	195.1	93.1	151.4	167.9
62.5°	232.5	311.6	232.2	106.5	112.6	138.6
65°	298.2	328.1	301.2	135.8	80.4	125.1
67.5°	283.1	304.3	280.1	145.6	55.3	112.9
70°	278.1	294.5	275.1	166.3	51.3	94.6
72.5°	259.5	261.5	254.1	154.1	46.2	78.7
75°	201.1	187.7	193.7	132.8	46.3	67.1
77.5°	125.0	119.6	120.5	101.3	40.8	50.4
80°	94.5	91.6	90.1	85.5	38.1	38.1
82.5°	70.1	67.1	65.6	65.9	32.0	29.6
85°	32.0	29.0	27.5	38.1	22.8	16.8
87.5°	7.6	7.4	6.4	8.6	8.9	6.1
90°	7.3	6.3	7.3	12.6	2.1	0.0
92.5°	56.7	40.8	56.7	171.0	47.6	11.8
95°	195.2	123.2	195.2	528.4	109.9	34.7
97.5°	551.1	335.6	551.1	832.9	139.8	67.2
100°	899.6	604.2	899.6	930.6	158.4	87.4
102.5°	1261.8	1005.9	1261.8	910.3	178.7	110.1
105°	1579.3	1501.1	1579.3	831.6	207.1	147.4
107.5°	1610.7	1701.3	1610.7	755.8	239.8	182.7
110°	1571.2	1735.8	1571.2	717.9	260.9	206.3



TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1504.8	1713.1	1504.8	695.2	282.0	229.1
115°	1391.9	1634.8	1391.9	672.7	312.5	262.1
117.5°	1286.1	1534.8	1286.1	664.7	342.7	295.0
120°	1224.4	1463.2	1224.4	662.1	362.1	316.9
122.5°	1170.1	1390.8	1170.1	662.1	379.9	337.1
125°	1099.2	1293.7	1099.2	663.2	406.5	366.3
127.5°	1045.7	1211.6	1045.7	662.1	431.7	390.1
130°	1015.0	1165.3	1015.0	662.1	448.5	405.3
132.5°	987.0	1125.7	987.0	661.3	462.8	418.8
135°	948.0	1066.3	948.0	659.0	485.3	439.0
137.5°	906.3	1016.0	906.3	659.0	505.5	461.5
140°	879.2	983.2	879.2	659.0	519.0	475.8
142.5°	854.5	945.3	854.5	658.1	531.7	490.1
145°	815.4	891.6	815.4	659.0	550.7	512.6
147.5°	783.2	841.7	783.2	660.2	567.5	535.2
150°	765.4	814.8	765.4	661.1	579.3	549.5
152.5°	750.0	790.3	750.0	661.9	589.5	563.0
155°	731.2	759.0	731.2	663.2	603.8	584.2
157.5°	717.3	736.7	717.3	664.4	618.6	602.8
160°	708.8	723.2	708.8	665.3	627.1	613.7
162.5°	701.1	713.1	701.1	666.1	634.7	624.7
165°	691.8	700.0	691.8	666.3	646.2	639.0
167.5°	684.5	688.0	684.5	667.6	654.9	651.2
170°	681.1	682.1	681.1	668.4	660.0	657.9
172.5°	677.7	677.9	677.7	668.4	663.4	662.1
175°	674.7	672.7	674.7	669.5	668.4	668.4
177.5°	672.2	670.5	672.2	669.7	670.6	671.4
180°	670.5	670.5	670.5	670.5	670.5	670.5



TEST NUMBER: P853793

CATALOG NUMBER: SQ2-FA-100U-075D-940-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	11.16	11.87	12.21	12.91	14.30	10.02	10.73	11.06	11.76	13.16
	3H	11.85	12.49	12.91	13.54	14.95	16.16	16.80	17.22	17.84	19.26
	4H	12.26	12.86	13.32	13.91	15.33	17.43	18.03	18.50	19.08	20.51
	6H	12.61	13.16	13.68	14.21	15.65	18.03	18.59	19.11	19.64	21.07
	8H	12.72	13.25	13.80	14.31	15.74	18.16	18.68	19.24	19.75	21.18
	12H	12.79	13.29	13.87	14.35	15.80	18.19	18.69	19.28	19.75	21.20
4H	2H	11.54	12.14	12.62	13.19	14.62	10.54	11.14	11.61	12.19	13.61
	3H	12.53	13.03	13.61	14.11	15.54	16.85	17.36	17.93	18.43	19.87
	4H	13.09	13.55	14.17	14.62	16.07	18.30	18.76	19.39	19.83	21.29
	6H	13.56	13.95	14.65	15.05	16.50	19.03	19.43	20.13	20.52	21.97
	8H	13.73	14.10	14.82	15.18	16.64	19.20	19.57	20.29	20.65	22.12
	12H	13.84	14.17	14.95	15.27	16.74	19.26	19.59	20.36	20.68	22.15
8H	4H	14.18	14.55	15.28	15.64	17.10	18.42	18.79	19.51	19.87	21.33
	6H	14.79	15.09	15.90	16.22	17.68	19.30	19.60	20.41	20.72	22.18
	8H	15.03	15.29	16.14	16.40	17.88	19.55	19.81	20.67	20.92	22.40
	12H	15.19	15.42	16.31	16.53	18.05	19.66	19.89	20.78	21.00	22.52
12H	4H	14.32	14.66	15.43	15.75	17.22	18.38	18.71	19.48	19.80	21.27
	6H	15.07	15.33	16.18	16.44	17.92	19.31	19.57	20.43	20.68	22.16
	8H	15.36	15.59	16.48	16.69	18.21	19.58	19.81	20.70	20.92	22.44