

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: P855045

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855045
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-11, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-075U-075D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 750 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

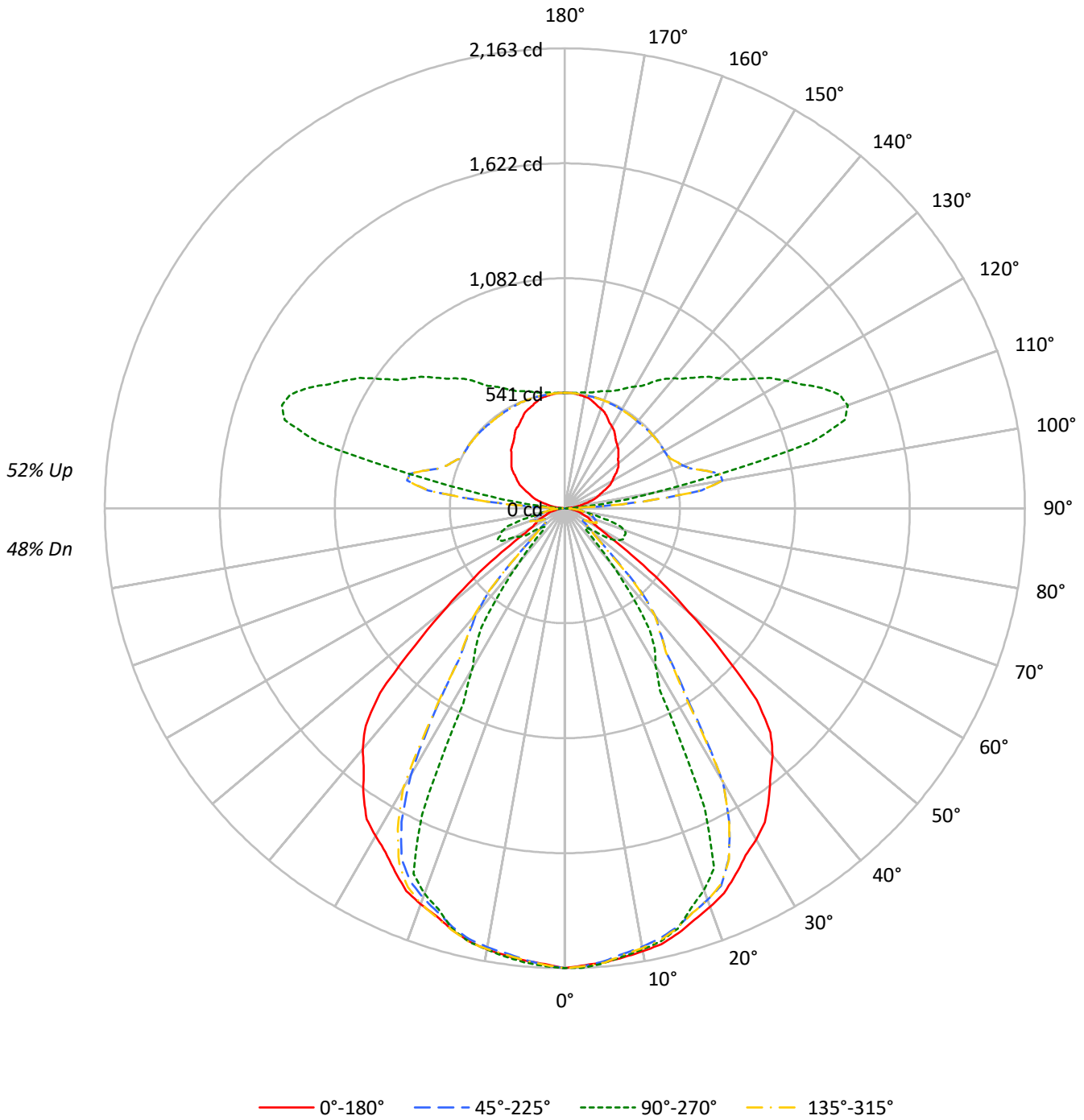
Lumens per Lamp: N/A
Luminaire Lumens: 6524.5 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 50
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: P855045

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

Luminous Intensity Polar Plot





TEST NUMBER: P855045

CATALOG NUMBER: SQ2-FA-075U-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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	98	95	91	88	91	87	84	82	74	72	70	61	60	59	50	49	48	43
2	91	84	78	74	83	78	73	69	66	63	60	55	53	51	45	44	42	38
3	84	75	68	63	77	70	64	59	60	55	52	50	47	45	42	40	38	34
4	77	68	60	55	71	63	57	52	54	49	46	46	42	40	38	36	34	30
5	72	61	54	48	66	57	50	46	49	44	41	42	38	36	35	33	31	28
6	67	55	48	43	61	52	45	41	45	40	36	39	35	32	33	30	28	25
7	62	51	43	38	57	48	41	36	41	36	33	36	32	29	30	28	26	23
8	58	47	39	34	54	44	37	33	38	33	30	33	29	27	28	26	23	21
9	54	43	36	31	50	40	34	30	35	31	27	31	27	24	27	24	22	20
10	51	40	33	28	47	37	31	27	33	28	25	29	25	22	25	22	20	18

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: P855045

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.5	3.1
10°-20°	577.4	8.8
20°-30°	787.3	12.1
30°-40°	661.6	10.1
40°-50°	375.8	5.8
50°-60°	199.4	3.1
60°-70°	183.6	2.8
70°-80°	134.8	2.1
80°-90°	35.7	0.5
90°-100°	205.6	3.2
100°-110°	681.5	10.4
110°-120°	676.3	10.4
120°-130°	550.9	8.4
130°-140°	447.7	6.9
140°-150°	347.7	5.3
150°-160°	250.5	3.8
160°-170°	153.4	2.4
170°-180°	51.8	0.8
0°-30°	1568.2	24.0
0°-40°	2229.8	34.2
0°-60°	2805.0	43.0
0°-90°	3159.1	48.4
90°-120°	1563.3	24.0
90°-150°	2909.7	44.6
90°-180°	3365.0	51.6
0°-180°	6524.5	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	4	0	4	0	2
95°	29	89	29	89	29	33
105°	119	1203	119	1203	119	126
115°	213	1337	213	1337	213	210
125°	297	1059	297	1059	297	264
135°	356	870	356	870	356	275
145°	413	726	413	726	413	259
155°	472	614	472	614	472	217
165°	518	566	518	566	518	146
175°	541	545	541	545	541	51
180°	544	544	544	544	544	



TEST NUMBER: P855045

CATALOG NUMBER: SQ2-FA-075U-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	11.9	5.9	6.1	6.1	6.1	5.9	11.9	6.6	10.6	7.2
90°	0.0	1.1	3.4	4.5	4.5	4.5	3.4	1.1	0.0	1.1	3.4
92.5°	9.0	34.7	102.4	33.2	27.9	33.2	102.4	34.7	9.0	34.7	102.4
95°	29.3	86.5	372.5	133.0	88.9	133.0	372.5	86.5	29.3	86.5	372.5
97.5°	53.8	113.6	650.2	379.2	239.7	379.2	650.2	113.6	53.8	113.6	650.2
100°	70.9	128.1	752.9	646.6	428.7	646.6	752.9	128.1	70.9	128.1	752.9
102.5°	89.8	145.3	746.6	988.2	746.6	988.2	746.6	145.3	89.8	145.3	746.6
105°	119.3	169.9	682.0	1286.7	1203.0	1286.7	682.0	169.9	119.3	169.9	682.0
107.5°	149.5	194.6	620.0	1317.0	1380.6	1317.0	620.0	194.6	149.5	194.6	620.0
110°	166.5	211.7	588.6	1286.9	1415.7	1286.9	588.6	211.7	166.5	211.7	588.6



TEST NUMBER: P855045

CATALOG NUMBER: SQ2-FA-075U-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°	184.5	228.8	569.6	1233.8	1397.7	1233.8	569.6	228.8	184.5	228.8	569.6
115°	212.7	254.5	549.2	1143.3	1336.9	1143.3	549.2	254.5	212.7	254.5	549.2
117.5°	240.6	277.8	541.7	1056.8	1260.0	1056.8	541.7	277.8	240.6	277.8	541.7
120°	257.7	294.0	539.1	1002.7	1199.6	1002.7	539.1	294.0	257.7	294.0	539.1
122.5°	273.1	308.4	539.1	958.2	1140.3	958.2	539.1	308.4	273.1	308.4	539.1
125°	297.1	330.1	539.1	898.3	1059.0	898.3	539.1	330.1	297.1	330.1	539.1
127.5°	316.9	349.3	537.7	853.0	990.3	853.0	537.7	349.3	316.9	349.3	537.7
130°	328.6	362.7	536.8	826.5	949.7	826.5	536.8	362.7	328.6	362.7	536.8
132.5°	339.4	374.4	535.9	804.7	915.6	804.7	535.9	374.4	339.4	374.4	535.9
135°	355.6	391.9	534.6	770.9	869.9	770.9	534.6	391.9	355.6	391.9	534.6
137.5°	373.1	408.2	533.2	738.2	825.6	738.2	533.2	408.2	373.1	408.2	533.2
140°	384.9	419.0	532.3	716.4	796.8	716.4	532.3	419.0	384.9	419.0	532.3
142.5°	395.7	428.9	533.2	694.7	766.1	694.7	533.2	428.9	395.7	428.9	533.2
145°	413.0	443.8	533.4	663.1	725.9	663.1	533.4	443.8	413.0	443.8	533.4
147.5°	431.7	457.5	533.7	636.4	683.1	636.4	533.7	457.5	431.7	457.5	533.7
150°	443.4	466.5	534.6	620.9	660.6	620.9	534.6	466.5	443.4	466.5	534.6
152.5°	454.2	476.5	535.5	608.2	639.8	608.2	535.5	476.5	454.2	476.5	535.5
155°	471.5	488.0	536.8	592.5	614.4	592.5	536.8	488.0	471.5	488.0	536.8
157.5°	488.4	501.2	538.2	581.3	596.9	581.3	538.2	501.2	488.4	501.2	538.2
160°	497.4	508.5	539.1	573.1	585.2	573.1	539.1	508.5	497.4	508.5	539.1
162.5°	506.4	514.8	539.1	567.6	577.1	567.6	539.1	514.8	506.4	514.8	539.1
165°	517.6	523.1	539.1	560.6	566.0	560.6	539.1	523.1	517.6	523.1	539.1
167.5°	528.0	530.8	540.2	554.2	557.1	554.2	540.2	530.8	528.0	530.8	540.2
170°	533.4	534.6	540.2	551.4	552.5	551.4	540.2	534.6	533.4	534.6	540.2
172.5°	537.1	538.1	541.0	548.7	548.9	548.7	541.0	538.1	537.1	538.1	541.0
175°	541.2	541.2	542.4	545.8	544.6	545.8	542.4	541.2	541.2	541.2	542.4
177.5°	543.5	543.5	542.6	544.4	542.6	544.4	542.6	543.5	543.5	543.5	542.6
180°	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5



TEST NUMBER: P855045

CATALOG NUMBER: SQ2-FA-075U-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°	7.5	7.5	6.1	7.2	9.3	6.6
90°	4.5	4.5	4.5	3.4	1.1	0.0
92.5°	33.2	27.9	33.2	102.4	34.7	9.0
95°	133.0	88.9	133.0	372.5	86.5	29.3
97.5°	379.2	239.7	379.2	650.2	113.6	53.8
100°	646.6	428.7	646.6	752.9	128.1	70.9
102.5°	988.2	746.6	988.2	746.6	145.3	89.8
105°	1286.7	1203.0	1286.7	682.0	169.9	119.3
107.5°	1317.0	1380.6	1317.0	620.0	194.6	149.5
110°	1286.9	1415.7	1286.9	588.6	211.7	166.5



TEST NUMBER: P855045

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1233.8	1397.7	1233.8	569.6	228.8	184.5
115°	1143.3	1336.9	1143.3	549.2	254.5	212.7
117.5°	1056.8	1260.0	1056.8	541.7	277.8	240.6
120°	1002.7	1199.6	1002.7	539.1	294.0	257.7
122.5°	958.2	1140.3	958.2	539.1	308.4	273.1
125°	898.3	1059.0	898.3	539.1	330.1	297.1
127.5°	853.0	990.3	853.0	537.7	349.3	316.9
130°	826.5	949.7	826.5	536.8	362.7	328.6
132.5°	804.7	915.6	804.7	535.9	374.4	339.4
135°	770.9	869.9	770.9	534.6	391.9	355.6
137.5°	738.2	825.6	738.2	533.2	408.2	373.1
140°	716.4	796.8	716.4	532.3	419.0	384.9
142.5°	694.7	766.1	694.7	533.2	428.9	395.7
145°	663.1	725.9	663.1	533.4	443.8	413.0
147.5°	636.4	683.1	636.4	533.7	457.5	431.7
150°	620.9	660.6	620.9	534.6	466.5	443.4
152.5°	608.2	639.8	608.2	535.5	476.5	454.2
155°	592.5	614.4	592.5	536.8	488.0	471.5
157.5°	581.3	596.9	581.3	538.2	501.2	488.4
160°	573.1	585.2	573.1	539.1	508.5	497.4
162.5°	567.6	577.1	567.6	539.1	514.8	506.4
165°	560.6	566.0	560.6	539.1	523.1	517.6
167.5°	554.2	557.1	554.2	540.2	530.8	528.0
170°	551.4	552.5	551.4	540.2	534.6	533.4
172.5°	548.7	548.9	548.7	541.0	538.1	537.1
175°	545.8	544.6	545.8	542.4	541.2	541.2
177.5°	544.4	542.6	544.4	542.6	543.5	543.5
180°	543.5	543.5	543.5	543.5	543.5	543.5



TEST NUMBER: P855045

CATALOG NUMBER: SQ2-FA-075U-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	12.11	12.86	13.10	13.85	15.15	10.96	11.71	11.96	12.70	14.01
	3H	12.80	13.48	13.81	14.47	15.80	17.11	17.78	18.12	18.78	20.11
	4H	13.21	13.85	14.23	14.85	16.18	18.38	19.02	19.40	20.02	21.35
	6H	13.56	14.15	14.59	15.15	16.50	18.99	19.57	20.01	20.58	21.92
	8H	13.68	14.23	14.71	15.25	16.59	19.11	19.66	20.14	20.69	22.03
	12H	13.75	14.28	14.78	15.29	16.65	19.15	19.68	20.18	20.69	22.05
4H	2H	12.50	13.13	13.52	14.13	15.46	11.49	12.12	12.51	13.13	14.46
	3H	13.49	14.02	14.51	15.05	16.39	17.81	18.34	18.84	19.37	20.71
	4H	14.05	14.53	15.08	15.55	16.92	19.26	19.74	20.29	20.76	22.13
	6H	14.52	14.94	15.56	15.98	17.35	19.99	20.41	21.04	21.45	22.82
	8H	14.69	15.08	15.73	16.12	17.49	20.16	20.55	21.20	21.58	22.96
	12H	14.80	15.15	15.86	16.21	17.59	20.22	20.57	21.28	21.62	23.00
8H	4H	15.14	15.53	16.19	16.57	17.95	19.38	19.77	20.42	20.80	22.18
	6H	15.75	16.07	16.82	17.15	18.52	20.25	20.57	21.32	21.65	23.03
	8H	15.99	16.27	17.06	17.33	18.73	20.51	20.78	21.58	21.85	23.24
	12H	16.16	16.40	17.23	17.46	18.90	20.62	20.87	21.70	21.93	23.36
12H	4H	15.29	15.63	16.35	16.69	18.07	19.34	19.68	20.40	20.74	22.12
	6H	16.03	16.31	17.10	17.37	18.77	20.27	20.54	21.34	21.61	23.00
	8H	16.32	16.57	17.40	17.63	19.06	20.54	20.79	21.62	21.85	23.28