

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: P853745

Luminaire Tested: SQ2-FA-025U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853745
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-025U-075D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

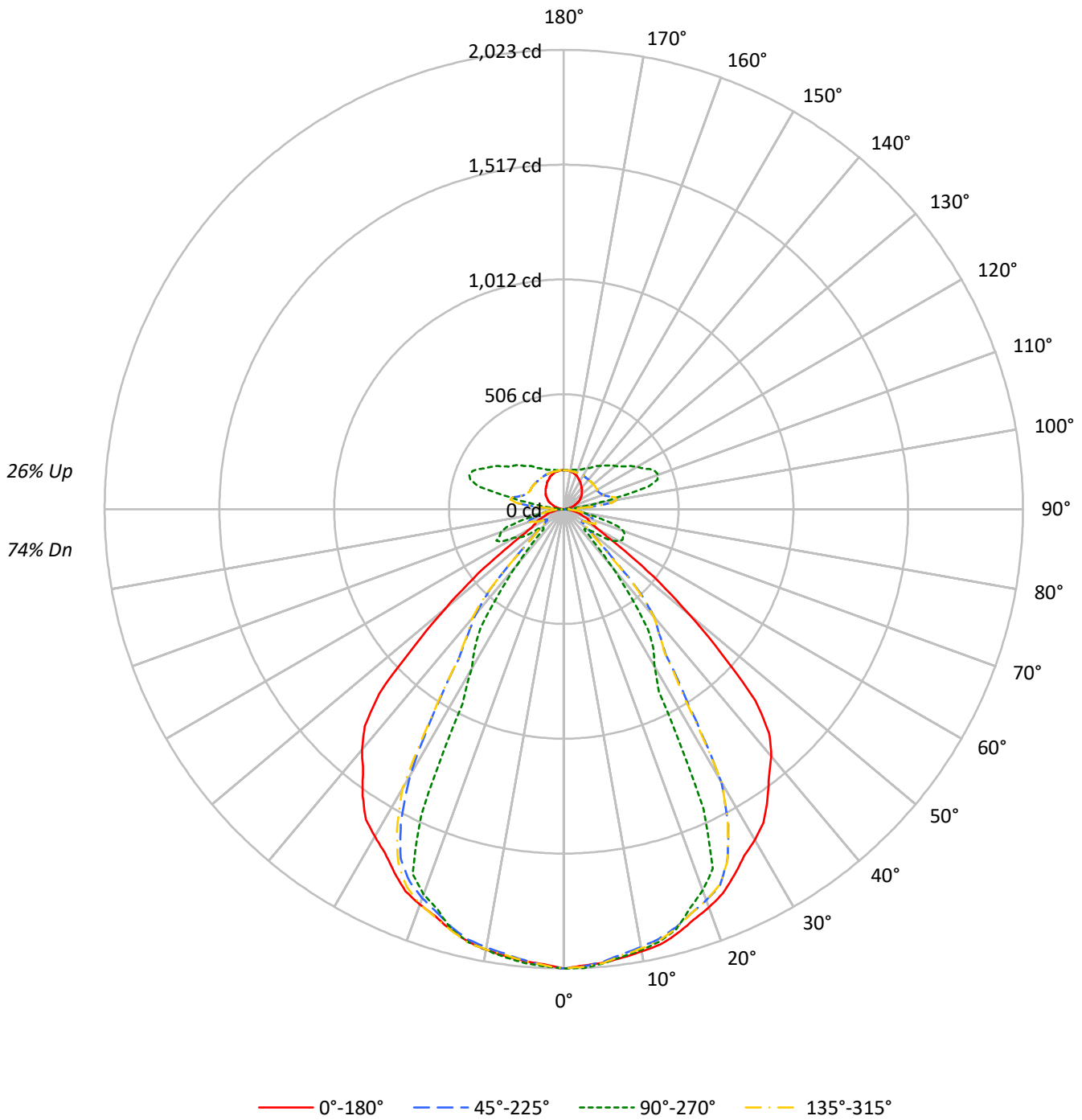
Lumens per Lamp: N/A
Luminaire Lumens: 4019.0 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 34.1
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: P853745

CATALOG NUMBER: SQ2-FA-025U-075D-940-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853745

CATALOG NUMBER: SQ2-FA-025U-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	113	113	113	113	107	107	107	107	96	96	96	87	87	87	78	78	78	74				
1	105	101	97	94	99	96	93	90	87	85	83	79	77	75	71	70	69	65				
2	97	90	85	80	92	86	81	77	78	75	71	71	69	66	65	63	61	58				
3	90	81	75	69	85	78	72	67	71	67	63	65	62	58	60	57	54	51				
4	83	74	67	61	79	71	64	59	65	60	56	60	56	52	55	52	49	46				
5	78	67	60	54	74	65	58	53	60	54	50	55	51	47	51	47	44	42				
6	73	62	54	49	69	59	52	48	55	49	45	51	46	43	47	43	40	38				
7	68	57	49	44	65	55	48	43	51	45	41	47	43	39	44	40	37	35				
8	64	52	45	40	61	51	44	39	47	42	38	44	39	36	41	37	34	32				
9	60	49	42	37	57	47	41	36	44	38	35	41	36	33	39	35	32	30				
10	57	45	38	34	54	44	38	33	41	36	32	39	34	31	36	32	29	28				

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: P853745

CATALOG NUMBER: SQ2-FA-025U-075D-940-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.4	4.7
10°-20°	540.2	13.4
20°-30°	736.5	18.3
30°-40°	619.0	15.4
40°-50°	351.6	8.7
50°-60°	186.5	4.6
60°-70°	171.7	4.3
70°-80°	126.1	3.1
80°-90°	33.4	0.8
90°-100°	69.4	1.7
100°-110°	215.7	5.4
110°-120°	211.0	5.3
120°-130°	172.3	4.3
130°-140°	140.9	3.5
140°-150°	110.0	2.7
150°-160°	79.4	2.0
160°-170°	48.5	1.2
170°-180°	16.4	0.4
0°-30°	1467.1	36.5
0°-40°	2086.1	51.9
0°-60°	2624.2	65.3
0°-90°	2955.4	73.5
90°-120°	496.1	12.3
90°-150°	919.3	22.9
90°-180°	1064.0	26.5
0°-180°	4019.0	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	3	0	3	0	1
95°	10	30	10	30	10	11
105°	38	387	38	387	38	40
115°	67	416	67	416	67	66
125°	94	328	94	328	94	83
135°	112	271	112	271	112	87
145°	131	227	131	227	131	83
155°	150	193	150	193	150	69
165°	165	179	165	179	165	46
175°	171	171	171	171	171	16
180°	171	171	171	171	171	



TEST NUMBER: P853745

CATALOG NUMBER: SQ2-FA-025U-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	11.1	5.5	5.5	5.5	5.5	5.5	11.1	6.1	9.9	6.7
90°	0.0	1.0	3.2	3.2	3.2	3.2	3.2	1.0	0.0	1.0	3.2
92.5°	3.4	11.8	40.2	13.2	10.7	13.2	40.2	11.8	3.4	11.8	40.2
95°	9.5	28.0	127.2	46.9	30.5	46.9	127.2	28.0	9.5	28.0	127.2
97.5°	17.2	36.4	210.7	131.2	82.6	131.2	210.7	36.4	17.2	36.4	210.7
100°	23.1	40.6	237.6	222.3	148.2	222.3	237.6	40.6	23.1	40.6	237.6
102.5°	29.0	45.7	232.6	317.4	249.2	317.4	232.6	45.7	29.0	45.7	232.6
105°	37.8	53.3	212.4	405.4	386.9	405.4	212.4	53.3	37.8	53.3	212.4
107.5°	46.7	61.1	193.0	412.2	432.5	412.2	193.0	61.1	46.7	61.1	193.0
110°	52.6	67.0	182.9	402.5	442.6	402.5	182.9	67.0	52.6	67.0	182.9



TEST NUMBER: P853745

CATALOG NUMBER: SQ2-FA-025U-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°	58.5	72.0	177.9	385.1	435.9	385.1	177.9	72.0	58.5	72.0	177.9
115°	67.3	79.6	172.4	355.7	416.3	355.7	172.4	79.6	67.3	79.6	172.4
117.5°	75.9	87.2	170.1	327.5	389.6	327.5	170.1	87.2	75.9	87.2	170.1
120°	81.0	92.3	169.3	311.5	371.1	311.5	169.3	92.3	81.0	92.3	169.3
122.5°	86.0	97.3	170.1	297.9	352.6	297.9	170.1	97.3	86.0	97.3	170.1
125°	93.6	103.9	170.3	279.7	328.0	279.7	170.3	103.9	93.6	103.9	170.3
127.5°	99.7	110.2	170.3	266.1	307.2	266.1	170.3	110.2	99.7	110.2	170.3
130°	103.0	114.3	170.3	258.4	295.4	258.4	170.3	114.3	103.0	114.3	170.3
132.5°	107.2	118.5	169.5	251.6	286.2	251.6	169.5	118.5	107.2	118.5	169.5
135°	112.5	124.8	169.3	241.4	271.2	241.4	169.3	124.8	112.5	124.8	169.3
137.5°	118.6	129.9	169.3	231.3	258.4	231.3	169.3	129.9	118.6	129.9	169.3
140°	122.0	133.3	169.3	224.5	249.2	224.5	169.3	133.3	122.0	133.3	169.3
142.5°	126.2	136.6	169.3	217.7	239.9	217.7	169.3	136.6	126.2	136.6	169.3
145°	131.4	141.7	169.3	208.6	227.1	208.6	169.3	141.7	131.4	141.7	169.3
147.5°	137.7	146.6	170.3	200.1	214.7	200.1	170.3	146.6	137.7	146.6	170.3
150°	141.9	149.1	170.3	195.8	207.1	195.8	170.3	149.1	141.9	149.1	170.3
152.5°	145.3	151.7	170.3	191.6	201.2	191.6	170.3	151.7	145.3	151.7	170.3
155°	150.3	155.5	170.3	187.3	193.4	187.3	170.3	155.5	150.3	155.5	170.3
157.5°	155.4	159.3	170.3	183.4	187.4	183.4	170.3	159.3	155.4	159.3	170.3
160°	158.8	161.8	170.3	180.9	184.0	180.9	170.3	161.8	158.8	161.8	170.3
162.5°	161.3	163.5	170.3	179.2	181.5	179.2	170.3	163.5	161.3	163.5	170.3
165°	165.1	166.1	171.4	176.7	178.7	176.7	171.4	166.1	165.1	166.1	171.4
167.5°	167.4	167.6	170.3	175.2	176.2	175.2	170.3	167.6	167.4	167.6	170.3
170°	168.2	169.2	170.3	173.5	174.5	173.5	170.3	169.2	168.2	169.2	170.3
172.5°	169.9	170.1	171.2	172.6	172.8	172.6	171.2	170.1	169.9	170.1	171.2
175°	171.4	171.4	171.4	172.4	171.4	172.4	171.4	171.4	171.4	171.4	171.4
177.5°	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4
180°	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4	171.4



TEST NUMBER: P853745

CATALOG NUMBER: SQ2-FA-025U-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°	6.7	6.7	5.5	6.7	8.7	6.1
90°	3.2	3.2	3.2	3.2	1.0	0.0
92.5°	13.2	10.7	13.2	40.2	11.8	3.4
95°	46.9	30.5	46.9	127.2	28.0	9.5
97.5°	131.2	82.6	131.2	210.7	36.4	17.2
100°	222.3	148.2	222.3	237.6	40.6	23.1
102.5°	317.4	249.2	317.4	232.6	45.7	29.0
105°	405.4	386.9	405.4	212.4	53.3	37.8
107.5°	412.2	432.5	412.2	193.0	61.1	46.7
110°	402.5	442.6	402.5	182.9	67.0	52.6



TEST NUMBER: P853745

CATALOG NUMBER: SQ2-FA-025U-075D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	385.1	435.9	385.1	177.9	72.0	58.5
115°	355.7	416.3	355.7	172.4	79.6	67.3
117.5°	327.5	389.6	327.5	170.1	87.2	75.9
120°	311.5	371.1	311.5	169.3	92.3	81.0
122.5°	297.9	352.6	297.9	170.1	97.3	86.0
125°	279.7	328.0	279.7	170.3	103.9	93.6
127.5°	266.1	307.2	266.1	170.3	110.2	99.7
130°	258.4	295.4	258.4	170.3	114.3	103.0
132.5°	251.6	286.2	251.6	169.5	118.5	107.2
135°	241.4	271.2	241.4	169.3	124.8	112.5
137.5°	231.3	258.4	231.3	169.3	129.9	118.6
140°	224.5	249.2	224.5	169.3	133.3	122.0
142.5°	217.7	239.9	217.7	169.3	136.6	126.2
145°	208.6	227.1	208.6	169.3	141.7	131.4
147.5°	200.1	214.7	200.1	170.3	146.6	137.7
150°	195.8	207.1	195.8	170.3	149.1	141.9
152.5°	191.6	201.2	191.6	170.3	151.7	145.3
155°	187.3	193.4	187.3	170.3	155.5	150.3
157.5°	183.4	187.4	183.4	170.3	159.3	155.4
160°	180.9	184.0	180.9	170.3	161.8	158.8
162.5°	179.2	181.5	179.2	170.3	163.5	161.3
165°	176.7	178.7	176.7	171.4	166.1	165.1
167.5°	175.2	176.2	175.2	170.3	167.6	167.4
170°	173.5	174.5	173.5	170.3	169.2	168.2
172.5°	172.6	172.8	172.6	171.2	170.1	169.9
175°	172.4	171.4	172.4	171.4	171.4	171.4
177.5°	171.4	171.4	171.4	171.4	171.4	171.4
180°	171.4	171.4	171.4	171.4	171.4	171.4



TEST NUMBER: P853745

CATALOG NUMBER: SQ2-FA-025U-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	14.06	15.01	14.81	15.76	16.66	12.92	13.86	13.67	14.61	15.51
	3H	14.77	15.61	15.53	16.37	17.31	19.07	19.92	19.84	20.68	21.61
	4H	15.18	15.98	15.96	16.75	17.69	20.35	21.15	21.13	21.92	22.87
	6H	15.54	16.27	16.33	17.05	18.01	20.97	21.70	21.76	22.48	23.43
	8H	15.66	16.35	16.46	17.15	18.11	21.09	21.79	21.89	22.59	23.54
	12H	15.73	16.40	16.54	17.19	18.17	21.14	21.80	21.94	22.59	23.57
4H	2H	14.47	15.26	15.25	16.03	16.98	13.46	14.26	14.24	15.03	15.97
	3H	15.47	16.13	16.26	16.94	17.90	19.79	20.45	20.58	21.26	22.22
	4H	16.03	16.63	16.84	17.44	18.43	21.24	21.85	22.05	22.65	23.64
	6H	16.51	17.03	17.34	17.86	18.86	21.99	22.51	22.81	23.34	24.33
	8H	16.68	17.17	17.51	17.99	19.00	22.16	22.64	22.98	23.46	24.47
	12H	16.80	17.24	17.65	18.08	19.09	22.22	22.65	23.07	23.50	24.51
8H	4H	17.14	17.62	17.97	18.45	19.45	21.37	21.86	22.20	22.68	23.69
	6H	17.75	18.15	18.60	19.02	20.02	22.26	22.65	23.11	23.52	24.53
	8H	17.98	18.34	18.85	19.20	20.22	22.51	22.86	23.37	23.72	24.75
	12H	18.16	18.47	19.03	19.32	20.40	22.63	22.94	23.50	23.80	24.88
12H	4H	17.29	17.72	18.13	18.57	19.58	21.34	21.77	22.18	22.62	23.63
	6H	18.02	18.38	18.89	19.24	20.26	22.27	22.62	23.13	23.48	24.51
	8H	18.33	18.64	19.19	19.49	20.57	22.55	22.86	23.42	23.71	24.79