

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: P853757

Luminaire Tested: SQ2-FA-050U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853757  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-050U-075D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 750 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

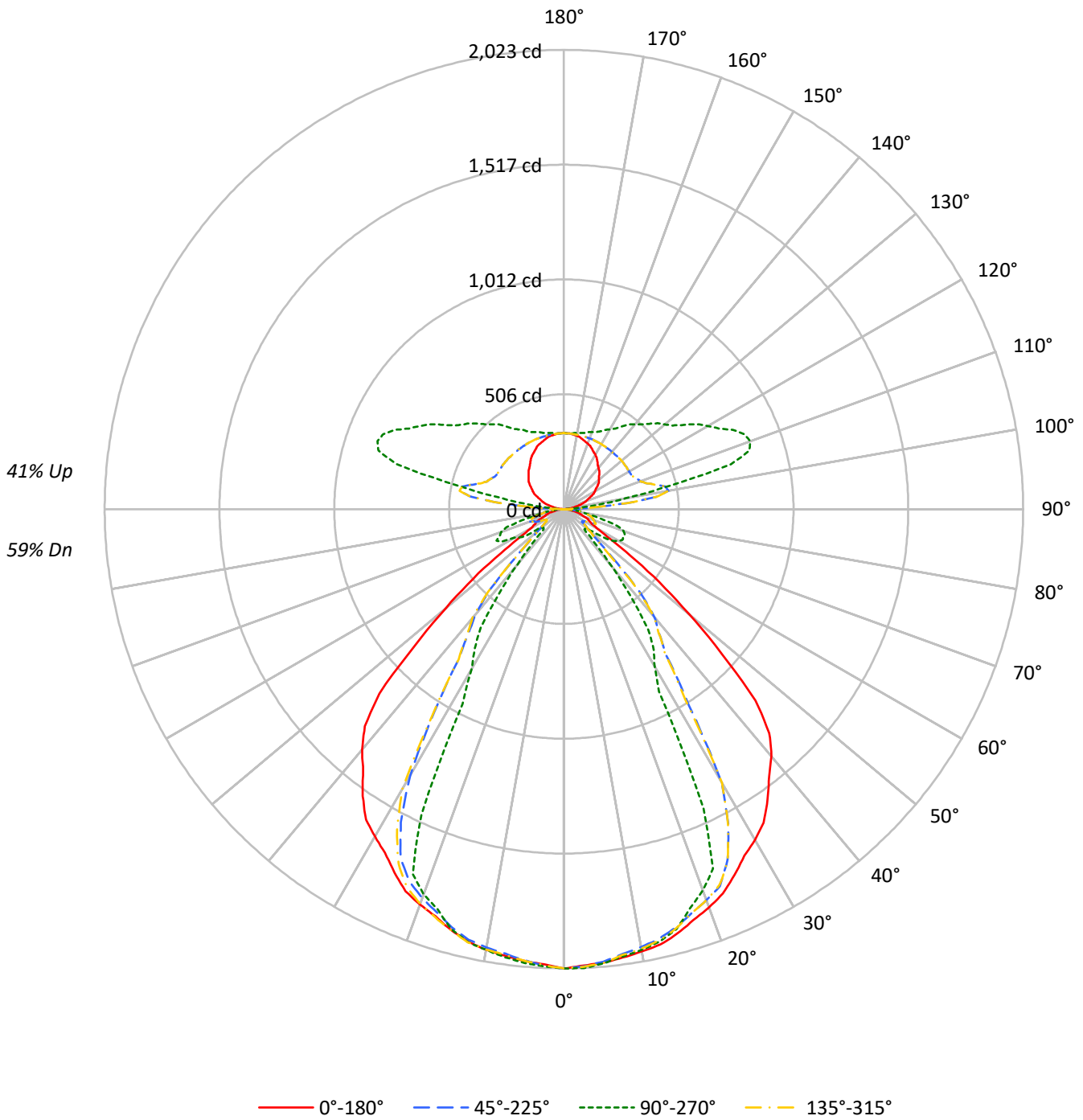
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5034.5 lumens  
Efficiency: N/A  
Efficacy: 121.3 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): 41.5  
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	50	30	10	0	
RCR																						
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59				
1	101	97	94	90	94	91	88	85	79	77	75	68	67	65	59	58	57	52				
2	93	87	81	76	87	81	76	72	71	68	65	62	59	57	53	52	50	46				
3	86	78	71	66	80	73	67	63	64	60	56	56	53	50	49	47	45	41				
4	80	70	63	57	75	66	60	55	59	54	50	52	48	45	45	42	40	37				
5	74	64	56	51	69	60	53	49	54	48	44	47	43	40	42	39	36	33				
6	69	58	51	45	65	55	48	43	49	44	40	44	40	36	39	36	33	30				
7	64	53	46	41	60	50	44	39	45	40	36	40	36	33	36	33	30	28				
8	60	49	42	37	57	47	40	36	42	37	33	38	33	30	34	30	28	26				
9	57	45	38	34	53	43	37	32	39	34	30	35	31	28	31	28	26	24				
10	53	42	35	31	50	40	34	30	36	31	28	33	29	26	30	26	24	22				

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.4	3.8
10°-20°	540.2	10.7
20°-30°	736.5	14.6
30°-40°	619.0	12.3
40°-50°	351.6	7.0
50°-60°	186.5	3.7
60°-70°	171.7	3.4
70°-80°	126.1	2.5
80°-90°	33.4	0.7
90°-100°	133.3	2.6
100°-110°	423.0	8.4
110°-120°	414.7	8.2
120°-130°	337.5	6.7
130°-140°	275.2	5.5
140°-150°	214.5	4.3
150°-160°	154.6	3.1
160°-170°	94.4	1.9
170°-180°	31.9	0.6
0°-30°	1467.1	29.1
0°-40°	2086.1	41.4
0°-60°	2624.2	52.1
0°-90°	2955.4	58.7
90°-120°	971.1	19.3
90°-150°	1798.2	35.7
90°-180°	2079.0	41.3
0°-180°	5034.5	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	2
95°	18	58	18	58	18	21
105°	74	761	74	761	74	78
115°	132	823	132	823	132	130
125°	182	646	182	646	182	162
135°	220	532	220	532	220	170
145°	257	443	257	443	257	161
155°	293	378	293	378	293	135
165°	319	347	319	347	319	90
175°	334	335	334	335	334	32
180°	335	335	335	335	335	



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**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°	5.9	23.4	74.8	24.9	17.5	24.9	74.8	23.4	5.9	23.4	74.8
95°	17.9	53.9	242.2	89.8	57.9	89.8	242.2	53.9	17.9	53.9	242.2
97.5°	33.3	69.9	410.2	256.3	157.3	256.3	410.2	69.9	33.3	69.9	410.2
100°	44.2	79.2	467.5	426.2	276.9	426.2	467.5	79.2	44.2	79.2	467.5
102.5°	56.0	89.4	457.4	625.8	479.0	625.8	457.4	89.4	56.0	89.4	457.4
105°	73.7	103.6	416.9	794.2	761.2	794.2	416.9	103.6	73.7	103.6	416.9
107.5°	91.4	119.0	378.4	811.7	856.2	811.7	378.4	119.0	91.4	119.0	378.4
110°	103.2	129.9	359.0	791.5	873.9	791.5	359.0	129.9	103.2	129.9	359.0



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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°	115.0	140.1	348.1	756.6	861.2	756.6	348.1	140.1	115.0	140.1	348.1
115°	131.6	156.3	336.9	699.8	823.3	699.8	336.9	156.3	131.6	156.3	336.9
117.5°	147.8	171.3	332.5	645.1	769.6	645.1	332.5	171.3	147.8	171.3	332.5
120°	157.9	180.6	331.6	611.3	731.7	611.3	331.6	180.6	157.9	180.6	331.6
122.5°	168.0	189.9	331.6	584.1	696.4	584.1	331.6	189.9	168.0	189.9	331.6
125°	182.1	203.8	331.6	548.7	646.4	548.7	331.6	203.8	182.1	203.8	331.6
127.5°	194.6	215.4	331.6	521.2	604.5	521.2	331.6	215.4	194.6	215.4	331.6
130°	202.1	223.8	331.6	505.0	580.1	505.0	331.6	223.8	202.1	223.8	331.6
132.5°	209.7	231.3	330.8	492.2	559.9	492.2	330.8	231.3	209.7	231.3	330.8
135°	220.0	241.7	329.5	472.0	531.7	472.0	329.5	241.7	220.0	241.7	329.5
137.5°	230.2	252.8	329.3	452.7	506.0	452.7	329.3	252.8	230.2	252.8	329.3
140°	236.9	259.5	328.5	439.1	487.5	439.1	328.5	259.5	236.9	259.5	328.5
142.5°	245.3	267.1	329.3	425.5	470.6	425.5	329.3	267.1	245.3	267.1	329.3
145°	256.9	276.5	329.5	407.2	443.2	407.2	329.5	276.5	256.9	276.5	329.5
147.5°	268.5	285.2	329.8	391.1	420.5	391.1	329.8	285.2	268.5	285.2	329.8
150°	276.9	290.3	330.6	381.7	405.3	381.7	330.6	290.3	276.9	290.3	330.6
152.5°	283.6	295.4	330.6	374.0	393.6	374.0	330.6	295.4	283.6	295.4	330.6
155°	292.7	303.0	330.6	363.6	378.0	363.6	330.6	303.0	292.7	303.0	330.6
157.5°	302.4	309.4	331.6	357.1	367.0	357.1	331.6	309.4	302.4	309.4	331.6
160°	307.4	313.6	331.6	352.9	361.1	352.9	331.6	313.6	307.4	313.6	331.6
162.5°	312.5	317.0	331.6	349.5	355.2	349.5	331.6	317.0	312.5	317.0	331.6
165°	319.0	322.1	331.6	344.4	347.4	344.4	331.6	322.1	319.0	322.1	331.6
167.5°	325.1	325.9	332.7	340.8	343.4	340.8	332.7	325.9	325.1	325.9	332.7
170°	328.5	328.5	332.7	339.0	340.1	339.0	332.7	328.5	328.5	328.5	332.7
172.5°	330.2	331.0	332.7	337.3	337.5	337.3	332.7	331.0	330.2	331.0	332.7
175°	333.8	332.7	333.8	335.8	334.8	335.8	333.8	332.7	333.8	332.7	333.8
177.5°	334.8	334.0	334.0	335.6	334.0	335.6	334.0	334.0	334.8	334.0	334.0
180°	334.8	334.8	334.8	334.8	334.8	334.8	334.8	334.8	334.8	334.8	334.8



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**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°	24.9	17.5	24.9	74.8	23.4	5.9
95°	89.8	57.9	89.8	242.2	53.9	17.9
97.5°	256.3	157.3	256.3	410.2	69.9	33.3
100°	426.2	276.9	426.2	467.5	79.2	44.2
102.5°	625.8	479.0	625.8	457.4	89.4	56.0
105°	794.2	761.2	794.2	416.9	103.6	73.7
107.5°	811.7	856.2	811.7	378.4	119.0	91.4
110°	791.5	873.9	791.5	359.0	129.9	103.2





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	756.6	861.2	756.6	348.1	140.1	115.0
115°	699.8	823.3	699.8	336.9	156.3	131.6
117.5°	645.1	769.6	645.1	332.5	171.3	147.8
120°	611.3	731.7	611.3	331.6	180.6	157.9
122.5°	584.1	696.4	584.1	331.6	189.9	168.0
125°	548.7	646.4	548.7	331.6	203.8	182.1
127.5°	521.2	604.5	521.2	331.6	215.4	194.6
130°	505.0	580.1	505.0	331.6	223.8	202.1
132.5°	492.2	559.9	492.2	330.8	231.3	209.7
135°	472.0	531.7	472.0	329.5	241.7	220.0
137.5°	452.7	506.0	452.7	329.3	252.8	230.2
140°	439.1	487.5	439.1	328.5	259.5	236.9
142.5°	425.5	470.6	425.5	329.3	267.1	245.3
145°	407.2	443.2	407.2	329.5	276.5	256.9
147.5°	391.1	420.5	391.1	329.8	285.2	268.5
150°	381.7	405.3	381.7	330.6	290.3	276.9
152.5°	374.0	393.6	374.0	330.6	295.4	283.6
155°	363.6	378.0	363.6	330.6	303.0	292.7
157.5°	357.1	367.0	357.1	331.6	309.4	302.4
160°	352.9	361.1	352.9	331.6	313.6	307.4
162.5°	349.5	355.2	349.5	331.6	317.0	312.5
165°	344.4	347.4	344.4	331.6	322.1	319.0
167.5°	340.8	343.4	340.8	332.7	325.9	325.1
170°	339.0	340.1	339.0	332.7	328.5	328.5
172.5°	337.3	337.5	337.3	332.7	331.0	330.2
175°	335.8	334.8	335.8	333.8	332.7	333.8
177.5°	335.6	334.0	335.6	334.0	334.0	334.8
180°	334.8	334.8	334.8	334.8	334.8	334.8



TEST NUMBER: P853757

CATALOG NUMBER: SQ2-FA-050U-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	12.83	13.65	13.73	14.55	15.70	11.68	12.50	12.59	13.41	14.56
	3H	13.53	14.26	14.44	15.17	16.35	17.83	18.57	18.75	19.48	20.66
	4H	13.94	14.63	14.86	15.55	16.73	19.11	19.80	20.04	20.72	21.91
	6H	14.29	14.93	15.23	15.85	17.05	19.72	20.35	20.66	21.28	22.48
	8H	14.41	15.01	15.35	15.95	17.15	19.84	20.44	20.79	21.39	22.58
	12H	14.48	15.05	15.43	15.99	17.21	19.88	20.46	20.83	21.39	22.61
4H	2H	13.22	13.91	14.16	14.83	16.02	12.22	12.91	13.15	13.83	15.01
	3H	14.22	14.79	15.16	15.74	16.94	18.54	19.12	19.48	20.07	21.26
	4H	14.78	15.30	15.73	16.25	17.47	19.99	20.52	20.94	21.46	22.69
	6H	15.25	15.70	16.22	16.67	17.90	20.73	21.18	21.69	22.15	23.37
	8H	15.42	15.85	16.39	16.81	18.04	20.89	21.32	21.86	22.28	23.51
	12H	15.54	15.92	16.52	16.90	18.14	20.95	21.33	21.94	22.31	23.55
8H	4H	15.88	16.30	16.84	17.26	18.50	20.11	20.53	21.08	21.50	22.73
	6H	16.49	16.83	17.47	17.84	19.07	20.99	21.34	21.98	22.34	23.58
	8H	16.72	17.03	17.72	18.02	19.27	21.24	21.55	22.24	22.54	23.79
	12H	16.89	17.16	17.89	18.14	19.45	21.36	21.63	22.36	22.62	23.92
12H	4H	16.02	16.40	17.00	17.38	18.62	20.07	20.45	21.05	21.43	22.67
	6H	16.76	17.07	17.76	18.06	19.31	21.00	21.31	22.00	22.30	23.55
	8H	17.06	17.33	18.06	18.31	19.61	21.28	21.55	22.28	22.53	23.84