

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P937456

Luminaire Tested: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P937456
REPORT IS A COMBINATION OF REPORTS P933557 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

Summary

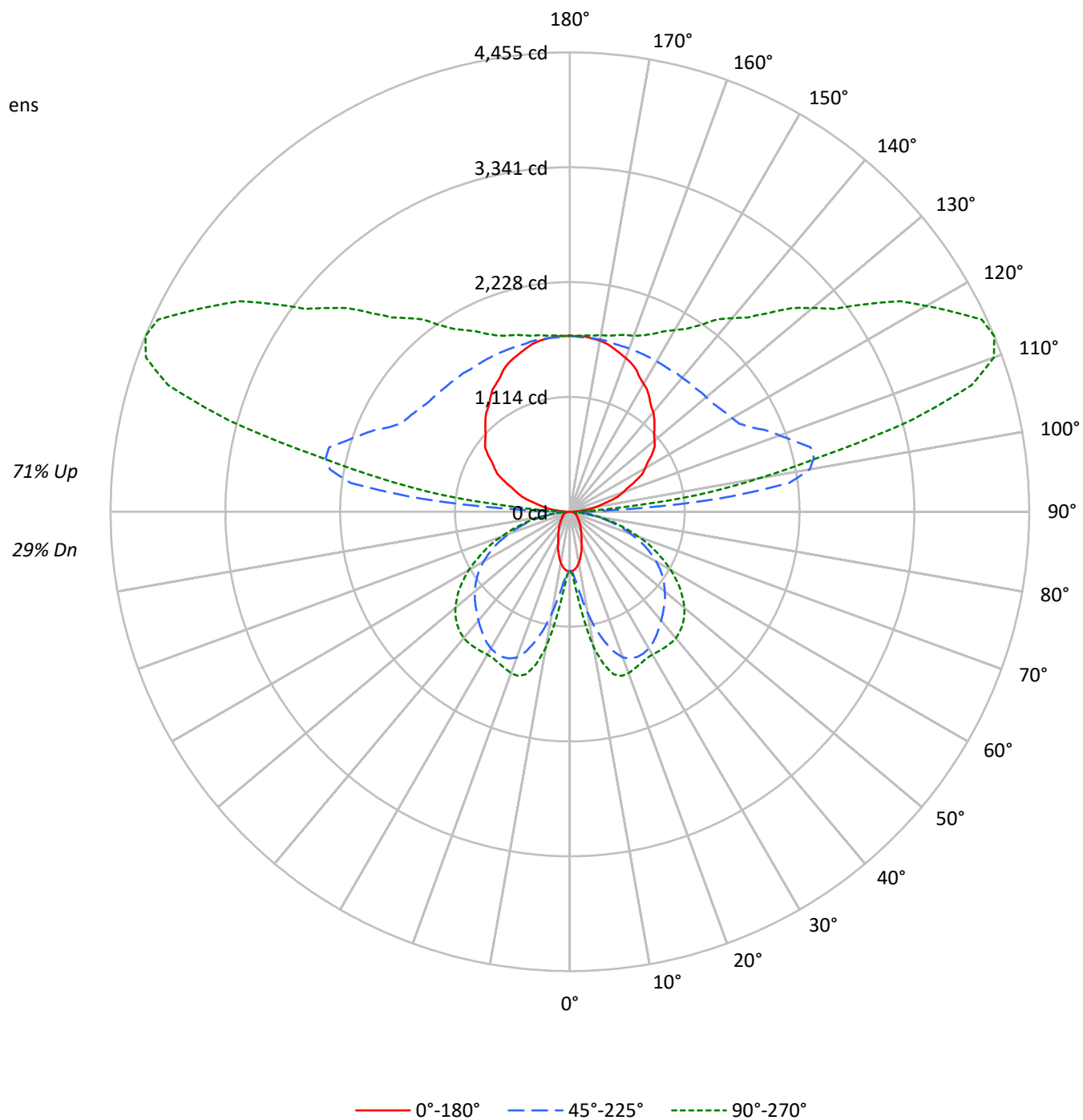
Lumens per Lamp: N/A
Luminaire Lumens: 15510.0 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 123.6
Input Voltage (V): NR
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: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

Luminous Intensity Polar Plot



TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37			29
1	93	88	84	81	83	79	76	73	62	60	58	46	45	44	32	31	30			23
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	28	26	25			19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21			16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	18			13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15			11
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13			10
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11			8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10			7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	11	9			7
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8			6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1776	1776	1776
5°	1736	2053	2388
10°	1575	2994	3958
15°	1339	3913	4780
20°	1091	4535	4871
25°	910	4747	4772
30°	768	4778	4763
35°	679	4700	4886
40°	592	4599	5013
45°	537	4524	5033
50°	493	4458	4950
55°	472	4360	4730
60°	484	4171	4384
65°	505	3882	3908
70°	538	3388	3301
75°	599	2764	2576
80°	660	1920	1736
85°	596	1020	888

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 5033 cd/sqm

TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	0.5
10°-20°	329.2	2.1
20°-30°	575.9	3.7
30°-40°	741.3	4.8
40°-50°	828.0	5.3
50°-60°	793.1	5.1
60°-70°	628.5	4.1
70°-80°	369.6	2.4
80°-90°	109.2	0.7
90°-100°	831.7	5.4
100°-110°	2186.6	14.1
110°-120°	2267.3	14.6
120°-130°	1818.6	11.7
130°-140°	1427.0	9.2
140°-150°	1095.3	7.1
150°-160°	788.8	5.1
160°-170°	482.6	3.1
170°-180°	163.0	1.1
0°-30°	979.4	6.3
0°-40°	1720.7	11.1
0°-60°	3341.8	21.5
0°-90°	4449.1	28.7
90°-120°	5285.6	34.1
90°-150°	9626.5	62.1
90°-180°	11061.0	71.3
0°-180°	15510.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	560	600	676	764	792	52
15°	419	774	1304	1581	1630	117
25°	268	877	1553	1621	1623	123
35°	181	838	1462	1546	1606	113
45°	124	668	1293	1481	1547	96
55°	89	425	1097	1274	1309	81
65°	70	225	814	916	929	70
75°	52	138	447	491	493	54
85°	18	42	111	122	124	20
90°	12	32	87	44	44	11
95°	110	431	1432	739	503	122
105°	394	597	2417	3670	3424	418
115°	700	850	1936	3862	4409	691
125°	973	1091	1761	2976	3511	864
135°	1160	1277	1706	2402	2724	898
145°	1346	1431	1684	2050	2210	843
155°	1521	1563	1684	1849	1903	699
165°	1641	1663	1684	1751	1773	463
175°	1706	1706	1696	1718	1718	162
180°	1706	1706	1706	1706	1706	

TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	574.3	574.3	578.0	579.8	583.5	585.3	589.1	592.7	603.8	605.7	609.3
5°	559.5	566.9	590.9	600.1	626.0	661.0	675.8	699.8	749.7	764.4	773.7
7.5°	537.3	553.9	613.0	627.8	692.5	784.8	823.5	875.3	954.7	993.4	1024.8
10°	502.3	537.3	642.6	677.7	782.9	923.3	995.2	1067.3	1187.3	1240.9	1261.2
12.5°	463.4	520.7	674.0	722.0	873.4	1078.4	1165.2	1244.6	1381.2	1453.3	1464.3
15°	419.2	496.7	703.5	773.7	969.5	1207.6	1303.7	1401.5	1529.0	1580.6	1593.6
17.5°	380.4	478.2	731.2	805.1	1043.3	1324.0	1421.8	1503.1	1606.5	1641.6	1650.8
20°	332.4	448.8	749.7	845.7	1120.9	1408.9	1503.1	1565.9	1636.1	1658.2	1661.9
22.5°	297.3	417.3	760.8	860.5	1172.5	1460.6	1540.0	1589.9	1637.9	1645.2	1647.1
25°	267.8	382.2	758.9	877.1	1216.9	1492.0	1552.9	1589.9	1617.5	1621.3	1621.3
27.5°	240.1	343.5	751.5	880.8	1250.1	1499.4	1547.4	1573.2	1586.1	1593.6	1593.6
30°	216.0	306.5	733.1	873.4	1264.9	1492.0	1530.8	1543.7	1556.6	1567.7	1573.2
32.5°	197.6	271.5	705.3	858.6	1266.7	1473.5	1501.3	1508.6	1527.0	1552.9	1562.2
35°	181.0	236.4	674.0	838.3	1255.7	1444.0	1462.4	1469.9	1506.8	1545.6	1558.4
37.5°	164.4	210.5	633.4	803.3	1239.0	1408.9	1421.8	1434.7	1492.0	1538.1	1552.9
40°	147.7	188.3	585.3	764.4	1213.2	1366.4	1377.6	1397.8	1473.5	1527.0	1541.8
42.5°	134.8	169.9	533.6	723.9	1180.0	1318.5	1335.1	1364.6	1451.3	1508.6	1525.2
45°	123.7	151.4	478.2	668.4	1137.5	1268.5	1292.6	1333.2	1425.5	1480.9	1495.7
47.5°	112.6	138.5	421.0	611.2	1091.3	1218.7	1250.1	1296.2	1390.4	1444.0	1456.9
50°	103.4	125.5	363.8	550.2	1041.4	1165.2	1202.1	1250.1	1346.2	1396.0	1412.6
52.5°	96.0	114.5	310.2	489.3	984.2	1109.8	1152.3	1202.1	1292.6	1340.6	1351.7
55°	88.6	105.3	264.0	424.7	925.1	1050.7	1096.8	1144.8	1233.5	1274.1	1281.5
57.5°	85.0	97.8	225.3	363.8	862.4	984.2	1035.9	1080.2	1163.3	1194.7	1202.1
60°	79.4	92.3	195.7	312.1	794.0	921.5	965.8	1010.0	1080.2	1106.1	1111.6
62.5°	73.9	88.6	173.5	262.2	723.9	847.6	891.9	932.5	991.6	1010.0	1017.4
65°	70.2	85.0	156.9	225.3	651.8	770.0	814.4	849.4	897.4	915.9	919.5
67.5°	66.4	81.2	144.0	193.9	579.8	692.5	725.7	758.9	795.8	814.4	816.2
70°	60.9	77.5	133.0	171.7	505.9	603.8	631.6	666.6	696.2	705.3	710.9
72.5°	57.3	72.0	125.5	155.1	430.2	518.9	544.7	565.0	590.9	600.1	600.1
75°	51.7	64.6	118.2	138.5	352.7	424.7	446.8	467.2	487.5	491.2	485.6
77.5°	46.2	57.3	101.6	116.4	275.1	336.1	354.5	365.6	382.2	385.9	387.7
80°	38.8	49.8	79.4	90.5	199.4	247.4	260.4	269.6	284.4	284.4	288.1
82.5°	29.5	38.8	57.3	64.6	134.8	169.9	181.0	186.5	195.7	195.7	195.7
85°	18.4	24.0	36.9	42.5	81.2	103.4	110.8	112.6	120.0	121.9	121.9
87.5°	9.3	12.9	24.0	25.9	42.5	53.6	53.6	57.3	57.3	55.4	53.6
90°	11.5	20.6	29.7	32.0	50.4	74.8	87.0	77.4	58.0	43.5	43.5
92.5°	45.8	123.6	201.5	221.0	310.7	430.3	490.1	429.6	308.4	217.6	209.0
95°	109.9	252.5	395.0	430.6	764.5	1209.9	1432.5	1278.3	969.9	738.6	712.3
97.5°	190.1	315.8	441.5	473.0	1029.8	1772.3	2143.6	2046.2	1851.3	1705.1	1655.2
100°	251.9	365.9	479.9	508.4	1126.4	1950.4	2362.4	2369.6	2383.8	2394.4	2335.1
102.5°	304.6	410.9	517.3	543.9	1170.7	2006.4	2424.3	2548.4	2796.8	2983.1	2932.1
105°	394.0	484.0	574.1	596.6	1203.6	2012.8	2417.4	2695.8	3252.6	3670.1	3642.8
107.5°	485.6	569.5	653.5	674.5	1209.6	1923.1	2279.9	2668.3	3444.9	4027.4	4034.0
110°	547.4	623.2	699.0	718.0	1200.4	1843.7	2165.4	2599.6	3467.8	4119.0	4147.5

TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	608.1	680.4	752.6	770.7	1200.9	1774.5	2061.2	2505.6	3394.2	4060.6	4104.4
115°	699.7	766.4	833.0	849.7	1211.9	1694.9	1936.4	2364.4	3220.5	3862.5	3923.1
117.5°	790.1	850.7	911.3	926.4	1234.5	1645.2	1850.5	2236.8	3009.4	3588.8	3656.1
120°	842.8	899.8	956.9	971.1	1252.8	1628.4	1816.2	2169.2	2875.0	3404.5	3469.9
122.5°	894.4	951.9	1009.4	1023.8	1279.2	1619.6	1789.9	2107.7	2743.4	3220.1	3284.6
125°	973.4	1025.8	1078.2	1091.3	1314.6	1612.4	1761.2	2031.2	2571.2	2976.2	3035.6
127.5°	1037.5	1090.4	1143.4	1156.6	1350.1	1608.2	1737.2	1969.0	2432.6	2780.3	2830.4
130°	1071.9	1128.9	1185.8	1200.1	1376.1	1610.7	1728.0	1934.4	2347.2	2656.7	2703.1
132.5°	1107.4	1164.4	1221.4	1235.6	1397.0	1612.3	1719.9	1904.7	2274.2	2551.4	2592.9
135°	1160.1	1211.9	1263.8	1276.8	1419.9	1610.8	1706.3	1861.0	2170.3	2402.4	2438.2
137.5°	1213.8	1265.2	1316.6	1329.5	1454.3	1620.7	1704.0	1834.7	2096.4	2292.6	2321.9
140°	1258.5	1305.9	1353.1	1365.0	1475.3	1622.4	1695.9	1808.9	2034.9	2204.4	2231.7
142.5°	1292.8	1336.6	1380.4	1391.3	1492.8	1628.2	1695.9	1795.2	1993.7	2142.5	2166.0
145°	1345.5	1383.7	1421.9	1431.4	1515.8	1628.3	1684.5	1765.6	1928.0	2049.8	2067.6
147.5°	1398.2	1435.4	1472.5	1481.8	1549.3	1639.5	1684.5	1748.4	1876.1	1971.9	1986.7
150°	1432.5	1466.1	1499.7	1508.1	1567.0	1645.3	1684.5	1738.5	1846.3	1927.3	1939.2
152.5°	1468.0	1493.5	1519.0	1525.3	1578.3	1649.1	1684.5	1730.6	1822.6	1891.7	1900.7
155°	1520.7	1539.5	1558.4	1563.1	1603.6	1657.5	1684.5	1721.1	1794.4	1849.3	1855.3
157.5°	1559.6	1578.0	1596.3	1600.9	1628.8	1666.0	1684.5	1713.0	1770.0	1812.7	1816.9
160°	1586.0	1600.3	1614.5	1618.1	1640.2	1669.7	1684.5	1708.9	1757.8	1794.4	1796.8
162.5°	1612.3	1622.9	1633.7	1636.3	1652.4	1673.8	1684.5	1705.1	1746.3	1777.2	1779.5
165°	1640.9	1650.6	1660.3	1662.7	1669.9	1679.7	1684.5	1699.3	1728.8	1750.9	1753.3
167.5°	1667.3	1671.9	1676.4	1677.6	1683.7	1691.9	1695.9	1705.6	1725.0	1739.5	1740.5
170°	1684.5	1689.1	1693.7	1694.8	1695.2	1695.6	1695.9	1705.6	1725.0	1739.5	1739.5
172.5°	1693.6	1694.6	1695.6	1695.9	1695.9	1695.9	1695.9	1703.5	1718.8	1730.3	1729.4
175°	1706.3	1706.3	1706.3	1706.3	1702.8	1698.2	1695.9	1700.8	1710.4	1717.6	1717.6
177.5°	1706.3	1706.3	1706.3	1706.3	1703.6	1700.0	1698.2	1702.0	1709.7	1715.4	1714.3
180°	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3	1706.3

TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

CANDELA DISTRIBUTION (continued):

	80°	90°
0°	574.3	574.3
2.5°	613.0	609.3
5°	788.5	792.2
7.5°	1061.8	1059.9
10°	1320.3	1336.9
12.5°	1508.6	1512.3
15°	1623.1	1630.5
17.5°	1667.5	1669.3
20°	1669.3	1665.6
22.5°	1648.9	1645.2
25°	1625.0	1623.1
27.5°	1602.8	1604.7
30°	1593.6	1599.1
32.5°	1593.6	1602.8
35°	1597.2	1606.5
37.5°	1595.4	1606.5
40°	1588.0	1600.9
42.5°	1567.7	1577.0
45°	1536.3	1547.4
47.5°	1495.7	1503.1
50°	1444.0	1451.3
52.5°	1379.4	1381.2
55°	1301.8	1309.2
57.5°	1218.7	1220.5
60°	1126.4	1131.9
62.5°	1028.6	1028.6
65°	925.1	928.8
67.5°	818.0	827.2
70°	709.1	710.9
72.5°	602.0	602.0
75°	491.2	493.0
77.5°	385.9	385.9
80°	286.2	288.1
82.5°	197.6	201.3
85°	123.7	123.7
87.5°	57.3	51.7
90°	43.5	43.5
92.5°	174.3	139.7
95°	607.5	502.7
97.5°	1455.7	1256.2
100°	2097.4	1859.7
102.5°	2728.6	2525.0
105°	3533.3	3423.9
107.5°	4060.5	4087.0
110°	4261.5	4375.6



TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	4279.5	4454.6
115°	4166.0	4408.7
117.5°	3925.3	4194.6
120°	3731.4	3993.1
122.5°	3542.6	3800.6
125°	3273.2	3510.9
127.5°	3031.1	3231.6
130°	2888.3	3073.5
132.5°	2758.8	2924.7
135°	2581.2	2724.3
137.5°	2438.9	2556.0
140°	2341.2	2450.6
142.5°	2260.2	2354.3
145°	2138.9	2210.1
147.5°	2045.7	2104.7
150°	1987.1	2034.9
152.5°	1936.9	1973.0
155°	1879.3	1903.2
157.5°	1833.7	1850.5
160°	1806.5	1816.2
162.5°	1788.7	1797.9
165°	1763.0	1772.6
167.5°	1744.5	1748.6
170°	1739.5	1739.5
172.5°	1725.8	1722.2
175°	1717.6	1717.6
177.5°	1710.3	1706.3
180°	1706.3	1706.3

TEST NUMBER: P937456

CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-5000K

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	0.63	1.35	1.75	2.46	4.01	13.83	14.54	14.94	15.66	17.20
	3H	1.33	1.97	2.45	3.09	4.65	15.66	16.30	16.78	17.42	18.98
	4H	1.62	2.23	2.75	3.35	4.92	16.30	16.91	17.43	18.03	19.60
	6H	1.86	2.42	3.00	3.55	5.13	16.73	17.29	17.87	18.42	19.99
	8H	1.92	2.46	3.07	3.60	5.17	16.85	17.38	17.99	18.52	20.09
	12H	1.94	2.44	3.09	3.58	5.17	16.91	17.42	18.06	18.56	20.15
4H	2H	7.84	8.45	8.98	9.57	11.14	14.08	14.69	15.22	15.81	17.38
	3H	9.39	9.90	10.54	11.05	12.63	16.12	16.63	17.27	17.78	19.36
	4H	9.48	9.95	10.63	11.09	12.68	16.88	17.35	18.03	18.49	20.09
	6H	9.48	9.89	10.64	11.05	12.63	17.42	17.82	18.57	18.98	20.57
	8H	9.45	9.83	10.61	10.98	12.59	17.58	17.95	18.73	19.11	20.71
	12H	9.40	9.75	10.58	10.91	12.52	17.67	18.01	18.84	19.17	20.78
8H	4H	10.92	11.29	12.07	12.44	14.05	16.93	17.31	18.08	18.46	20.06
	6H	11.15	11.46	12.33	12.66	14.26	17.56	17.87	18.73	19.06	20.66
	8H	11.17	11.44	12.35	12.61	14.23	17.78	18.05	18.96	19.22	20.84
	12H	11.13	11.37	12.31	12.54	14.19	17.92	18.16	19.10	19.33	20.98
12H	4H	11.05	11.39	12.23	12.56	14.17	16.87	17.22	18.05	18.38	19.99
	6H	11.41	11.68	12.59	12.85	14.48	17.54	17.81	18.72	18.98	20.60
	8H	11.47	11.71	12.66	12.88	14.53	17.76	18.00	18.95	19.17	20.83

END OF REPORT