

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: P937480

Luminaire Tested: SQ4-FB-100U-050D-B2750-1D-UNV-W2A-W-12-4000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P937480
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-B2750-1D-UNV-W2A-W-12-4000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

Summary

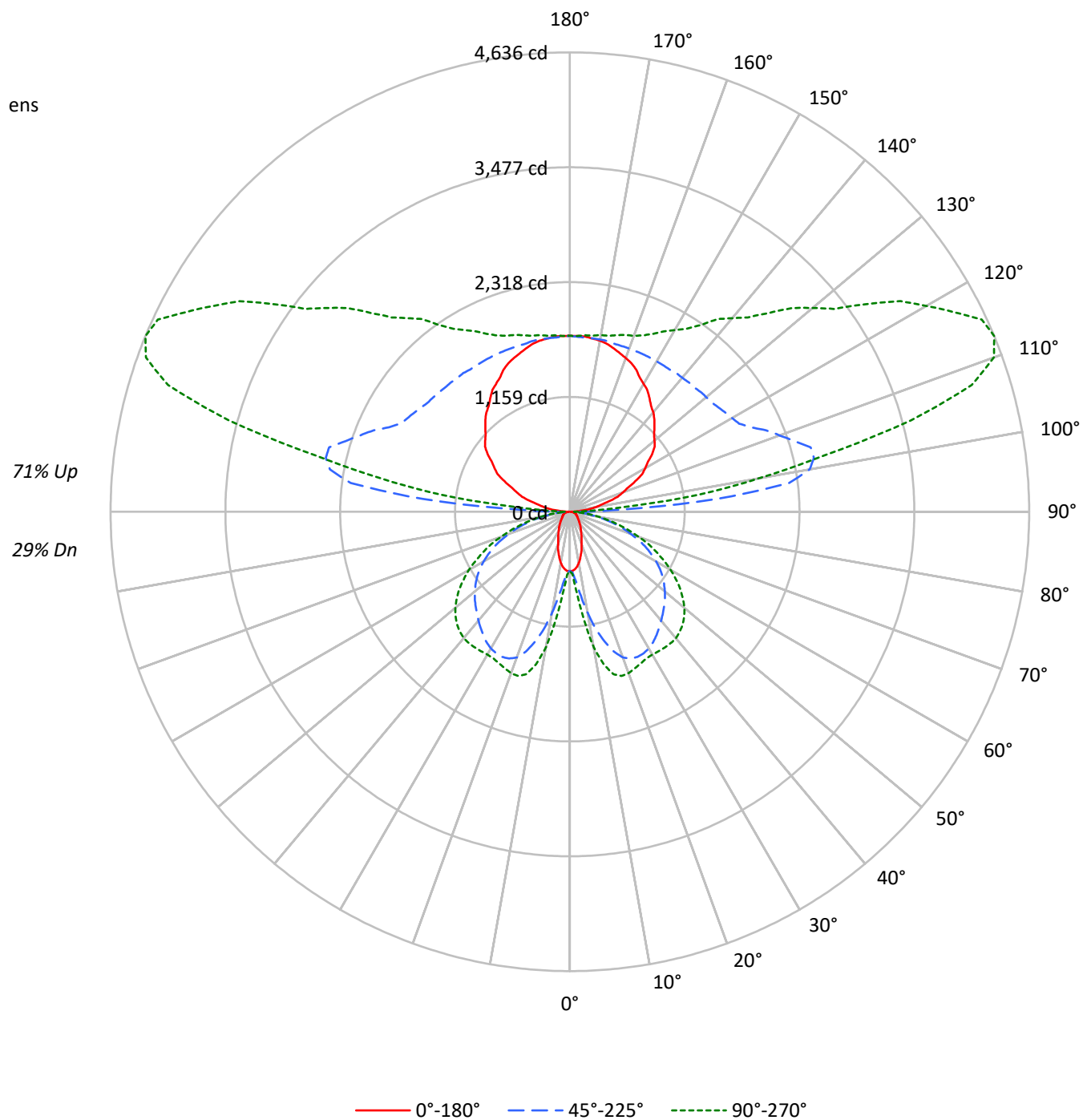
Lumens per Lamp: N/A
Luminaire Lumens: 16140.5 lumens
Efficiency: N/A
Efficacy: 130.6 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

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: P937480

CATALOG NUMBER: SQ4-FB-100U-050D-B2750-1D-UNV-W2A-W-12-4000K

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
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°	1848	1848	1848
5°	1807	2137	2485
10°	1639	3116	4119
15°	1394	4072	4974
20°	1135	4720	5069
25°	947	4940	4966
30°	799	4973	4957
35°	707	4891	5085
40°	617	4786	5217
45°	558	4708	5238
50°	513	4639	5151
55°	492	4537	4923
60°	504	4340	4562
65°	526	4039	4067
70°	561	3525	3436
75°	624	2876	2681
80°	687	1997	1807
85°	622	1062	924

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 5238 cd/sqm

TEST NUMBER: P937480

CATALOG NUMBER: SQ4-FB-100U-050D-B2750-1D-UNV-W2A-W-12-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.3	0.5
10°-20°	342.6	2.1
20°-30°	599.3	3.7
30°-40°	771.5	4.8
40°-50°	861.7	5.3
50°-60°	825.3	5.1
60°-70°	654.1	4.1
70°-80°	384.6	2.4
80°-90°	113.6	0.7
90°-100°	865.5	5.4
100°-110°	2275.5	14.1
110°-120°	2359.4	14.6
120°-130°	1892.6	11.7
130°-140°	1485.0	9.2
140°-150°	1139.8	7.1
150°-160°	820.8	5.1
160°-170°	502.2	3.1
170°-180°	169.7	1.1
0°-30°	1019.2	6.3
0°-40°	1790.7	11.1
0°-60°	3477.7	21.5
0°-90°	4629.9	28.7
90°-120°	5500.5	34.1
90°-150°	10017.8	62.1
90°-180°	11511.0	71.3
0°-180°	16140.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	582	624	703	796	824	54
15°	436	805	1357	1645	1697	121
25°	279	913	1616	1687	1689	128
35°	188	872	1522	1608	1672	118
45°	129	696	1345	1541	1610	100
55°	92	442	1141	1326	1362	84
65°	73	234	848	953	967	72
75°	54	144	465	511	513	56
85°	19	44	115	127	129	20
90°	12	33	90	45	45	11
95°	114	448	1491	769	523	127
105°	410	621	2516	3819	3563	435
115°	728	884	2015	4020	4588	719
125°	1013	1136	1833	3097	3654	899
135°	1207	1329	1776	2500	2835	934
145°	1400	1490	1753	2133	2300	877
155°	1582	1627	1753	1924	1981	727
165°	1708	1730	1753	1822	1845	482
175°	1776	1776	1765	1788	1788	169
180°	1776	1776	1776	1776	1776	

TEST NUMBER: P937480

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6	597.6
2.5°	597.6	597.6	601.5	603.4	607.2	609.1	613.0	616.8	628.4	630.3	634.1
5°	582.3	589.9	614.9	624.5	651.4	687.9	703.3	728.3	780.1	795.5	805.2
7.5°	559.2	576.4	637.9	653.3	720.6	816.7	857.0	910.9	993.5	1033.8	1066.4
10°	522.7	559.2	668.7	705.3	814.7	960.8	1035.7	1110.7	1235.6	1291.4	1312.5
12.5°	482.3	541.9	701.4	751.3	908.9	1122.2	1212.6	1295.2	1437.4	1512.3	1523.8
15°	436.2	516.9	732.1	805.2	1008.9	1256.7	1356.7	1458.5	1591.1	1644.9	1658.4
17.5°	395.8	497.7	760.9	837.8	1085.7	1377.8	1479.6	1564.2	1671.8	1708.3	1717.9
20°	345.9	467.0	780.1	880.1	1166.4	1466.2	1564.2	1629.5	1702.6	1725.6	1729.4
22.5°	309.4	434.2	791.7	895.5	1220.2	1520.0	1602.6	1654.5	1704.5	1712.1	1714.0
25°	278.7	397.8	789.8	912.8	1266.3	1552.6	1616.1	1654.5	1683.3	1687.2	1687.2
27.5°	249.8	357.5	782.0	916.6	1300.9	1560.4	1610.3	1637.2	1650.6	1658.4	1658.4
30°	224.8	319.0	762.9	908.9	1316.3	1552.6	1593.0	1606.5	1619.9	1631.4	1637.2
32.5°	205.6	282.5	734.0	893.5	1318.2	1533.4	1562.3	1569.9	1589.1	1616.1	1625.7
35°	188.3	246.0	701.4	872.4	1306.7	1502.7	1521.9	1529.6	1568.0	1608.4	1621.8
37.5°	171.0	219.1	659.1	835.9	1289.3	1466.2	1479.6	1493.0	1552.6	1600.7	1616.1
40°	153.8	196.0	609.1	795.5	1262.5	1422.0	1433.6	1454.7	1533.4	1589.1	1604.5
42.5°	140.3	176.8	555.3	753.3	1227.9	1372.0	1389.3	1420.1	1510.3	1569.9	1587.2
45°	128.7	157.6	497.7	695.6	1183.7	1320.1	1345.1	1387.4	1483.5	1541.1	1556.5
47.5°	117.2	144.1	438.2	636.0	1135.7	1268.2	1300.9	1348.9	1446.9	1502.7	1516.2
50°	107.6	130.6	378.6	572.6	1083.7	1212.6	1251.0	1300.9	1400.9	1452.7	1470.0
52.5°	99.9	119.2	322.8	509.2	1024.2	1154.9	1199.1	1251.0	1345.1	1395.1	1406.6
55°	92.3	109.5	274.8	442.0	962.7	1093.4	1141.4	1191.4	1283.6	1325.9	1333.6
57.5°	88.4	101.8	234.5	378.6	897.4	1024.2	1078.0	1124.1	1210.6	1243.3	1251.0
60°	82.6	96.1	203.7	324.8	826.3	958.9	1005.0	1051.1	1124.1	1151.1	1156.8
62.5°	76.9	92.3	180.6	272.8	753.3	882.0	928.2	970.4	1031.9	1051.1	1058.8
65°	73.1	88.4	163.3	234.5	678.3	801.3	847.5	883.9	933.9	953.1	956.9
67.5°	69.1	84.5	149.8	201.8	603.4	720.6	755.2	789.8	828.2	847.5	849.4
70°	63.4	80.7	138.4	178.7	526.5	628.4	657.2	693.7	724.5	734.0	739.8
72.5°	59.6	75.0	130.6	161.4	447.7	540.0	566.9	588.0	614.9	624.5	624.5
75°	53.8	67.2	123.0	144.1	367.0	442.0	465.0	486.2	507.3	511.1	505.4
77.5°	48.0	59.6	105.7	121.1	286.3	349.7	368.9	380.5	397.8	401.6	403.5
80°	40.4	51.9	82.6	94.2	207.5	257.5	270.9	280.6	296.0	296.0	299.8
82.5°	30.8	40.4	59.6	67.2	140.3	176.8	188.3	194.1	203.7	203.7	203.7
85°	19.2	25.0	38.4	44.2	84.5	107.6	115.3	117.2	124.9	126.8	126.8
87.5°	9.6	13.5	25.0	26.9	44.2	55.8	55.8	59.6	59.6	57.7	55.8
90°	11.9	21.5	30.9	33.3	52.4	77.8	90.5	80.5	60.4	45.3	45.3
92.5°	47.7	128.6	209.7	230.0	323.4	447.8	510.1	447.0	321.0	226.4	217.5
95°	114.4	262.7	411.0	448.1	795.6	1259.1	1490.8	1330.3	1009.3	768.6	741.3
97.5°	197.8	328.6	459.5	492.2	1071.7	1844.4	2230.8	2129.4	1926.5	1774.4	1722.5
100°	262.1	380.8	499.4	529.1	1172.2	2029.7	2458.5	2465.9	2480.7	2491.8	2430.0
102.5°	317.0	427.6	538.3	566.0	1218.3	2088.0	2522.8	2652.0	2910.5	3104.3	3051.3
105°	410.0	503.7	597.4	620.8	1252.5	2094.6	2515.7	2805.4	3384.8	3819.3	3790.9
107.5°	505.3	592.7	680.1	701.9	1258.8	2001.3	2372.6	2776.8	3585.0	4191.1	4198.0
110°	569.7	648.5	727.4	747.2	1249.2	1918.7	2253.4	2705.2	3608.8	4286.4	4316.1

TEST NUMBER: P937480

CATALOG NUMBER: SQ4-FB-100U-050D-B2750-1D-UNV-W2A-W-12-4000K

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	632.8	708.0	783.2	802.0	1249.7	1846.6	2145.0	2607.4	3532.2	4225.7	4271.2
115°	728.1	797.5	866.9	884.2	1261.2	1763.8	2015.1	2460.6	3351.4	4019.5	4082.6
117.5°	822.3	885.3	948.3	964.1	1284.7	1712.0	1925.8	2327.7	3131.7	3734.7	3804.7
120°	877.1	936.4	995.8	1010.6	1303.8	1694.6	1890.0	2257.3	2991.9	3542.9	3611.0
122.5°	930.7	990.6	1050.4	1065.4	1331.2	1685.5	1862.6	2193.3	2854.9	3351.0	3418.1
125°	1013.0	1067.5	1122.0	1135.7	1368.0	1677.9	1832.8	2113.8	2675.7	3097.2	3158.9
127.5°	1079.6	1134.7	1189.8	1203.6	1405.0	1673.5	1807.8	2049.0	2531.5	2893.4	2945.5
130°	1115.4	1174.7	1234.1	1248.9	1432.0	1676.2	1798.3	2013.0	2442.6	2764.7	2813.0
132.5°	1152.4	1211.7	1271.0	1285.8	1453.8	1677.8	1789.9	1982.1	2366.7	2655.1	2698.3
135°	1207.2	1261.2	1315.2	1328.7	1477.7	1676.3	1775.6	1936.6	2258.6	2500.1	2537.3
137.5°	1263.2	1316.7	1370.1	1383.5	1513.4	1686.6	1773.2	1909.3	2181.6	2385.8	2416.2
140°	1309.7	1359.0	1408.1	1420.5	1535.3	1688.3	1764.8	1882.4	2117.6	2294.0	2322.5
142.5°	1345.4	1391.0	1436.5	1447.9	1553.5	1694.4	1764.8	1868.2	2074.7	2229.6	2254.1
145°	1400.2	1439.9	1479.7	1489.6	1577.4	1694.5	1753.0	1837.4	2006.4	2133.1	2151.6
147.5°	1455.0	1493.7	1532.4	1542.0	1612.3	1706.1	1753.0	1819.5	1952.4	2052.1	2067.5
150°	1490.8	1525.7	1560.7	1569.4	1630.7	1712.2	1753.0	1809.2	1921.4	2005.6	2018.0
152.5°	1527.7	1554.2	1580.7	1587.3	1642.5	1716.1	1753.0	1800.9	1896.7	1968.6	1978.0
155°	1582.5	1602.1	1621.8	1626.7	1668.8	1724.9	1753.0	1791.1	1867.3	1924.5	1930.7
157.5°	1623.0	1642.1	1661.2	1666.0	1695.0	1733.7	1753.0	1782.6	1841.9	1886.4	1890.8
160°	1650.4	1665.3	1680.1	1683.9	1706.9	1737.6	1753.0	1778.4	1829.2	1867.3	1869.8
162.5°	1677.8	1688.9	1700.1	1702.9	1719.6	1741.8	1753.0	1774.4	1817.3	1849.5	1851.8
165°	1707.6	1717.7	1727.8	1730.3	1737.8	1747.9	1753.0	1768.4	1799.0	1822.0	1824.5
167.5°	1735.0	1739.8	1744.6	1745.8	1752.1	1760.6	1764.8	1775.0	1795.1	1810.2	1811.3
170°	1753.0	1757.8	1762.5	1763.7	1764.1	1764.6	1764.8	1775.0	1795.1	1810.2	1810.2
172.5°	1762.5	1763.5	1764.6	1764.8	1764.8	1764.8	1764.8	1772.8	1788.7	1800.7	1799.7
175°	1775.6	1775.6	1775.6	1775.6	1772.0	1767.2	1764.8	1769.9	1779.9	1787.5	1787.5
177.5°	1775.6	1775.6	1775.6	1775.6	1772.9	1769.1	1767.2	1771.2	1779.2	1785.1	1784.0
180°	1775.6	1775.6	1775.6	1775.6	1775.6	1775.6	1775.6	1775.6	1775.6	1775.6	1775.6

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	597.6	597.6
2.5°	637.9	634.1
5°	820.5	824.4
7.5°	1104.9	1103.0
10°	1374.0	1391.2
12.5°	1569.9	1573.7
15°	1689.1	1696.7
17.5°	1735.2	1737.1
20°	1737.1	1733.3
22.5°	1715.9	1712.1
25°	1691.0	1689.1
27.5°	1667.9	1669.9
30°	1658.4	1664.1
32.5°	1658.4	1667.9
35°	1662.2	1671.8
37.5°	1660.3	1671.8
40°	1652.5	1666.0
42.5°	1631.4	1641.1
45°	1598.8	1610.3
47.5°	1556.5	1564.2
50°	1502.7	1510.3
52.5°	1435.5	1437.4
55°	1354.8	1362.4
57.5°	1268.2	1270.1
60°	1172.2	1177.9
62.5°	1070.4	1070.4
65°	962.7	966.6
67.5°	851.3	860.8
70°	737.9	739.8
72.5°	626.5	626.5
75°	511.1	513.0
77.5°	401.6	401.6
80°	297.9	299.8
82.5°	205.6	209.4
85°	128.7	128.7
87.5°	59.6	53.8
90°	45.3	45.3
92.5°	181.4	145.4
95°	632.2	523.1
97.5°	1514.9	1307.3
100°	2182.7	1935.3
102.5°	2839.5	2627.7
105°	3676.9	3563.1
107.5°	4225.6	4253.1
110°	4434.7	4553.4

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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	4453.5	4635.7
115°	4335.3	4587.9
117.5°	4084.9	4365.1
120°	3883.1	4155.4
122.5°	3686.6	3955.1
125°	3406.3	3653.6
127.5°	3154.3	3362.9
130°	3005.7	3198.5
132.5°	2870.9	3043.6
135°	2686.1	2835.0
137.5°	2538.0	2659.9
140°	2436.4	2550.2
142.5°	2352.1	2450.1
145°	2225.8	2299.9
147.5°	2128.9	2190.3
150°	2067.9	2117.6
152.5°	2015.6	2053.2
155°	1955.6	1980.6
157.5°	1908.3	1925.8
160°	1879.9	1890.0
162.5°	1861.4	1870.9
165°	1834.7	1844.7
167.5°	1815.5	1819.7
170°	1810.2	1810.2
172.5°	1796.0	1792.2
175°	1787.5	1787.5
177.5°	1779.8	1775.6
180°	1775.6	1775.6

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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	0.77	1.49	1.89	2.60	4.15	13.96	14.68	15.08	15.79	17.34
	3H	1.47	2.11	2.59	3.23	4.79	15.80	16.44	16.92	17.56	19.12
	4H	1.76	2.37	2.89	3.49	5.06	16.44	17.05	17.57	18.17	19.74
	6H	2.00	2.56	3.14	3.69	5.26	16.87	17.43	18.01	18.55	20.13
	8H	2.06	2.60	3.21	3.74	5.31	16.99	17.52	18.13	18.66	20.23
	12H	2.08	2.58	3.23	3.72	5.31	17.05	17.56	18.20	18.69	20.29
4H	2H	7.98	8.59	9.12	9.71	11.28	14.22	14.83	15.36	15.95	17.52
	3H	9.53	10.04	10.68	11.19	12.77	16.26	16.77	17.40	17.92	19.49
	4H	9.62	10.09	10.77	11.23	12.82	17.02	17.49	18.17	18.63	20.23
	6H	9.62	10.02	10.78	11.18	12.77	17.56	17.96	18.71	19.12	20.71
	8H	9.59	9.97	10.75	11.12	12.73	17.72	18.09	18.87	19.24	20.85
	12H	9.54	9.88	10.71	11.05	12.66	17.81	18.15	18.98	19.31	20.92
8H	4H	11.05	11.43	12.21	12.58	14.19	17.07	17.44	18.22	18.60	20.20
	6H	11.29	11.60	12.47	12.79	14.40	17.69	18.01	18.87	19.20	20.80
	8H	11.31	11.58	12.49	12.75	14.37	17.92	18.19	19.10	19.36	20.98
	12H	11.27	11.51	12.45	12.68	14.33	18.06	18.29	19.24	19.46	21.12
12H	4H	11.19	11.53	12.36	12.70	14.31	17.01	17.36	18.19	18.52	20.13
	6H	11.55	11.82	12.73	12.99	14.61	17.68	17.95	18.86	19.12	20.74
	8H	11.61	11.85	12.80	13.02	14.67	17.90	18.14	19.09	19.31	20.96