

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: P937454

Luminaire Tested: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-3500K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P937454
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-12-3500K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

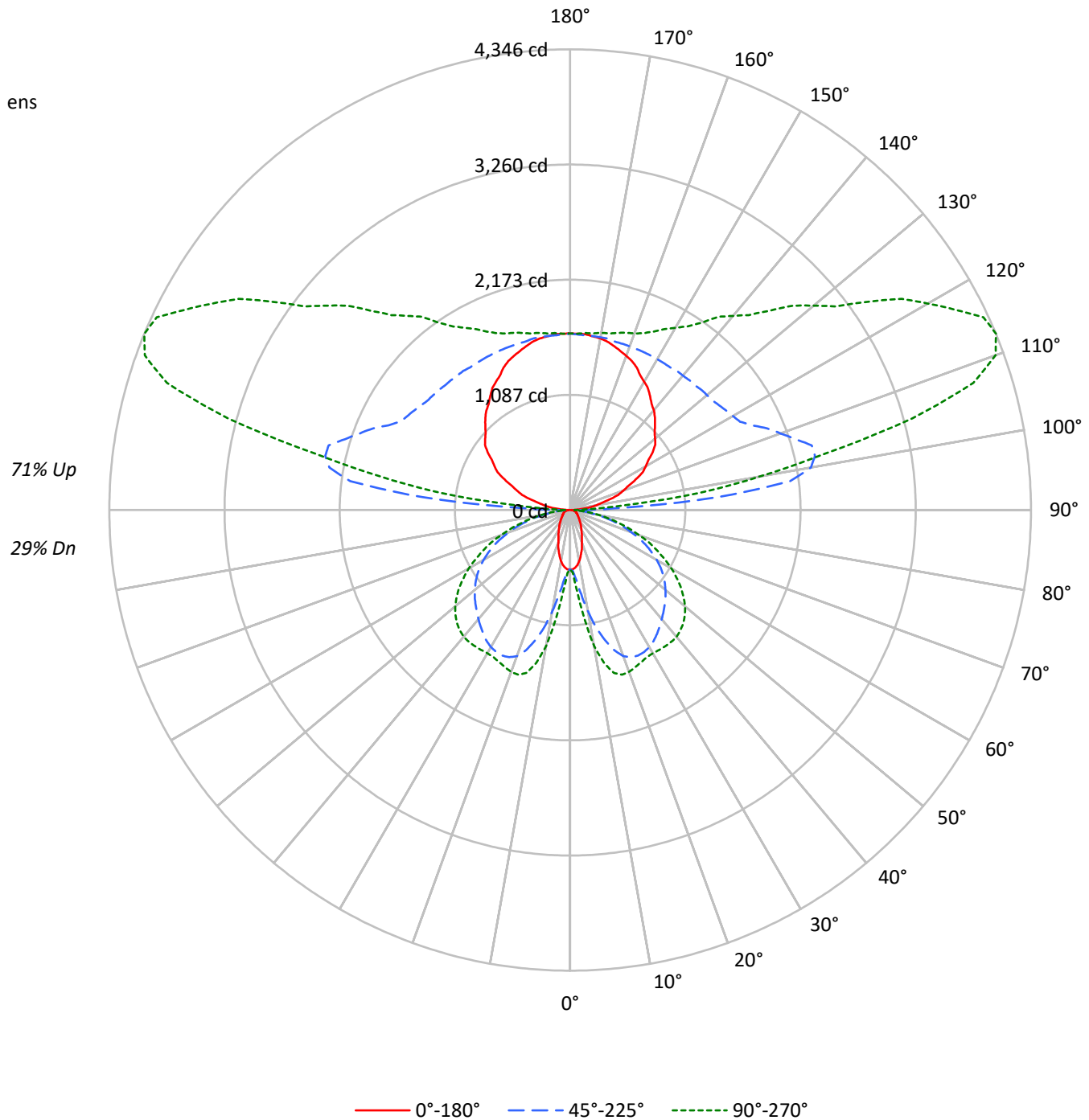
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15131.7 lumens
Efficiency: N/A
Efficacy: 122.4 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 (A_{in}): 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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CATALOG NUMBER: SQ4-FB-100U-050D-93050-1D-UNV-STD-W-12-3500K

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	0
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°	1733	1733	1733
5°	1694	2003	2329
10°	1537	2921	3862
15°	1307	3817	4663
20°	1064	4425	4752
25°	888	4631	4656
30°	749	4662	4647
35°	663	4586	4767
40°	578	4487	4891
45°	524	4414	4911
50°	481	4349	4829
55°	461	4254	4615
60°	472	4069	4277
65°	493	3787	3812
70°	525	3305	3221
75°	584	2696	2514
80°	645	1872	1693
85°	583	995	867

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4911 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	0.5
10°-20°	321.2	2.1
20°-30°	561.8	3.7
30°-40°	723.2	4.8
40°-50°	807.8	5.3
50°-60°	773.7	5.1
60°-70°	613.2	4.1
70°-80°	360.6	2.4
80°-90°	106.5	0.7
90°-100°	811.4	5.4
100°-110°	2133.3	14.1
110°-120°	2212.0	14.6
120°-130°	1774.3	11.7
130°-140°	1392.2	9.2
140°-150°	1068.5	7.1
150°-160°	769.5	5.1
160°-170°	470.8	3.1
170°-180°	159.1	1.1
0°-30°	955.5	6.3
0°-40°	1678.7	11.1
0°-60°	3260.3	21.5
0°-90°	4340.6	28.7
90°-120°	5156.7	34.1
90°-150°	9391.7	62.1
90°-180°	10791.0	71.3
0°-180°	15131.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	546	585	659	746	773	50
15°	409	755	1272	1542	1591	114
25°	261	856	1515	1582	1584	120
35°	177	818	1427	1508	1567	110
45°	121	652	1261	1445	1510	93
55°	86	414	1070	1243	1277	79
65°	68	220	794	894	906	68
75°	50	135	436	479	481	53
85°	18	42	108	119	121	19
90°	11	31	85	42	42	10
95°	107	420	1398	720	490	119
105°	384	582	2358	3581	3340	407
115°	683	829	1889	3768	4301	674
125°	950	1065	1718	2904	3425	843
135°	1132	1246	1665	2344	2658	876
145°	1313	1396	1643	2000	2156	822
155°	1484	1525	1643	1804	1857	682
165°	1601	1622	1643	1708	1729	452
175°	1665	1665	1654	1676	1676	158
180°	1665	1665	1665	1665	1665	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3	560.3
2.5°	560.3	560.3	563.9	565.7	569.2	571.0	574.7	578.3	589.1	590.9	594.5
5°	545.9	553.0	576.5	585.4	610.7	644.9	659.3	682.8	731.4	745.8	754.8
7.5°	524.2	540.4	598.1	612.5	675.6	765.7	803.5	853.9	931.4	969.2	999.8
10°	490.0	524.2	626.9	661.2	763.8	900.8	971.0	1041.2	1158.4	1210.6	1230.4
12.5°	452.1	508.0	657.5	704.3	852.1	1052.1	1136.8	1214.2	1347.5	1417.8	1428.6
15°	409.0	484.6	686.3	754.8	945.8	1178.1	1271.9	1367.3	1491.7	1542.1	1554.7
17.5°	371.1	466.5	713.4	785.5	1017.9	1291.7	1387.1	1466.4	1567.3	1601.5	1610.6
20°	324.3	437.8	731.4	825.1	1093.5	1374.6	1466.4	1527.7	1596.2	1617.7	1621.3
22.5°	290.1	407.1	742.2	839.5	1143.9	1425.0	1502.4	1551.1	1598.0	1605.1	1606.9
25°	261.3	372.9	740.4	855.7	1187.2	1455.6	1515.0	1551.1	1578.1	1581.7	1581.7
27.5°	234.2	335.1	733.2	859.3	1219.6	1462.9	1509.7	1534.8	1547.5	1554.7	1554.7
30°	210.8	299.0	715.2	852.1	1234.0	1455.6	1493.5	1506.1	1518.6	1529.5	1534.8
32.5°	192.8	264.8	688.1	837.7	1235.8	1437.6	1464.6	1471.8	1489.8	1515.0	1524.1
35°	176.6	230.6	657.5	817.9	1225.1	1408.8	1426.8	1434.0	1470.0	1507.9	1520.4
37.5°	160.4	205.4	617.9	783.7	1208.8	1374.6	1387.1	1399.7	1455.6	1500.6	1515.0
40°	144.1	183.7	571.0	745.8	1183.6	1333.1	1344.0	1363.7	1437.6	1489.8	1504.2
42.5°	131.5	165.7	520.6	706.2	1151.2	1286.3	1302.5	1331.3	1415.9	1471.8	1488.0
45°	120.7	147.7	466.5	652.1	1109.7	1237.6	1261.0	1300.7	1390.8	1444.8	1459.2
47.5°	109.9	135.1	410.8	596.3	1064.7	1189.0	1219.6	1264.6	1356.5	1408.8	1421.4
50°	100.9	122.5	354.9	536.8	1016.0	1136.8	1172.8	1219.6	1313.3	1361.9	1378.2
52.5°	93.6	111.7	302.6	477.4	960.2	1082.7	1124.2	1172.8	1261.0	1307.9	1318.7
55°	86.5	102.7	257.6	414.4	902.6	1025.0	1070.1	1116.9	1203.4	1243.1	1250.2
57.5°	82.9	95.4	219.8	354.9	841.3	960.2	1010.6	1053.9	1134.9	1165.6	1172.8
60°	77.4	90.1	191.0	304.5	774.6	899.0	942.2	985.4	1053.9	1079.1	1084.5
62.5°	72.1	86.5	169.3	255.8	706.2	826.9	870.2	909.7	967.4	985.4	992.6
65°	68.5	82.9	153.1	219.8	635.9	751.3	794.5	828.7	875.5	893.5	897.1
67.5°	64.8	79.2	140.5	189.2	565.7	675.6	708.0	740.4	776.4	794.5	796.3
70°	59.4	75.7	129.7	167.5	493.6	589.1	616.2	650.4	679.2	688.1	693.6
72.5°	55.9	70.3	122.5	151.3	419.7	506.2	531.5	551.2	576.5	585.4	585.4
75°	50.4	63.0	115.3	135.1	344.1	414.4	435.9	455.8	475.6	479.2	473.8
77.5°	45.0	55.9	99.1	113.5	268.4	327.9	345.9	356.7	372.9	376.5	378.3
80°	37.9	48.6	77.4	88.3	194.6	241.4	254.0	263.0	277.5	277.5	281.0
82.5°	28.8	37.9	55.9	63.0	131.5	165.7	176.6	181.9	191.0	191.0	191.0
85°	18.0	23.5	36.0	41.5	79.2	100.9	108.1	109.9	117.1	118.9	118.9
87.5°	9.0	12.6	23.5	25.2	41.5	52.3	52.3	55.9	55.9	54.1	52.3
90°	11.2	20.1	29.0	31.2	49.2	73.0	84.9	75.5	56.6	42.4	42.4
92.5°	44.7	120.6	196.6	215.6	303.2	419.8	478.2	419.1	300.9	212.3	203.9
95°	107.3	246.3	385.3	420.1	745.9	1180.4	1397.6	1247.2	946.3	720.5	694.9
97.5°	185.4	308.1	430.7	461.4	1004.7	1729.1	2091.4	1996.3	1806.1	1663.5	1614.9
100°	245.8	357.0	468.2	496.0	1098.9	1902.8	2304.8	2311.8	2325.7	2336.0	2278.1
102.5°	297.2	400.9	504.7	530.7	1142.1	1957.5	2365.1	2486.3	2728.6	2910.3	2860.6
105°	384.4	472.2	560.1	582.0	1174.2	1963.7	2358.4	2630.1	3173.3	3580.6	3553.9
107.5°	473.7	555.6	637.6	658.1	1180.1	1876.2	2224.3	2603.2	3360.9	3929.2	3935.6
110°	534.1	608.0	682.0	700.5	1171.2	1798.8	2112.6	2536.2	3383.2	4018.5	4046.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	593.2	663.8	734.2	751.9	1171.6	1731.2	2011.0	2444.5	3311.4	3961.6	4004.3
115°	682.6	747.7	812.7	829.0	1182.3	1653.6	1889.2	2306.8	3141.9	3768.3	3827.5
117.5°	770.9	830.0	889.0	903.8	1204.4	1605.0	1805.4	2182.2	2936.0	3501.3	3566.9
120°	822.3	877.9	933.5	947.4	1222.3	1588.7	1771.9	2116.2	2804.9	3321.4	3385.3
122.5°	872.6	928.7	984.8	998.8	1248.0	1580.1	1746.2	2056.3	2676.4	3141.6	3204.5
125°	949.7	1000.8	1051.9	1064.7	1282.5	1573.1	1718.3	1981.7	2508.5	2903.6	2961.5
127.5°	1012.2	1063.8	1115.5	1128.4	1317.2	1568.9	1694.8	1921.0	2373.3	2712.5	2761.4
130°	1045.7	1101.3	1156.9	1170.8	1342.5	1571.5	1685.9	1887.2	2289.9	2591.9	2637.1
132.5°	1080.4	1136.0	1191.6	1205.4	1362.9	1573.0	1678.0	1858.2	2218.8	2489.1	2529.6
135°	1131.8	1182.3	1233.0	1245.6	1385.3	1571.5	1664.7	1815.6	2117.4	2343.8	2378.8
137.5°	1184.2	1234.4	1284.5	1297.0	1418.8	1581.2	1662.4	1790.0	2045.3	2236.7	2265.2
140°	1227.8	1274.0	1320.1	1331.7	1439.3	1582.8	1654.5	1764.7	1985.3	2150.6	2177.3
142.5°	1261.3	1304.0	1346.7	1357.4	1456.4	1588.5	1654.5	1751.4	1945.1	2090.3	2113.2
145°	1312.7	1350.0	1387.2	1396.5	1478.8	1588.6	1643.4	1722.6	1881.0	1999.8	2017.1
147.5°	1364.1	1400.4	1436.6	1445.7	1511.6	1599.5	1643.4	1705.7	1830.4	1923.8	1938.3
150°	1397.6	1430.4	1463.1	1471.4	1528.7	1605.2	1643.4	1696.1	1801.3	1880.2	1891.9
152.5°	1432.2	1457.0	1481.9	1488.1	1539.8	1608.9	1643.4	1688.4	1778.2	1845.6	1854.4
155°	1483.6	1502.0	1520.4	1525.0	1564.5	1617.1	1643.4	1679.2	1750.6	1804.2	1810.1
157.5°	1521.6	1539.5	1557.4	1561.9	1589.1	1625.3	1643.4	1671.2	1726.8	1768.5	1772.6
160°	1547.3	1561.2	1575.1	1578.6	1600.2	1629.0	1643.4	1667.3	1714.9	1750.6	1752.9
162.5°	1573.0	1583.4	1593.8	1596.4	1612.1	1633.0	1643.4	1663.5	1703.7	1733.9	1736.1
165°	1600.9	1610.3	1619.8	1622.1	1629.2	1638.7	1643.4	1657.8	1686.6	1708.2	1710.5
167.5°	1626.6	1631.1	1635.6	1636.7	1642.6	1650.6	1654.5	1664.0	1682.9	1697.1	1698.0
170°	1643.4	1647.9	1652.4	1653.5	1653.8	1654.3	1654.5	1664.0	1682.9	1697.1	1697.1
172.5°	1652.3	1653.3	1654.3	1654.5	1654.5	1654.5	1654.5	1662.0	1676.9	1688.1	1687.2
175°	1664.7	1664.7	1664.7	1664.7	1661.3	1656.8	1654.5	1659.3	1668.7	1675.8	1675.8
177.5°	1664.7	1664.7	1664.7	1664.7	1662.1	1658.6	1656.8	1660.5	1668.0	1673.5	1672.5
180°	1664.7	1664.7	1664.7	1664.7	1664.7	1664.7	1664.7	1664.7	1664.7	1664.7	1664.7



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	560.3	560.3
2.5°	598.1	594.5
5°	769.3	772.8
7.5°	1035.9	1034.1
10°	1288.1	1304.3
12.5°	1471.8	1475.4
15°	1583.5	1590.7
17.5°	1626.8	1628.6
20°	1628.6	1625.0
22.5°	1608.7	1605.1
25°	1585.3	1583.5
27.5°	1563.7	1565.5
30°	1554.7	1560.1
32.5°	1554.7	1563.7
35°	1558.3	1567.3
37.5°	1556.5	1567.3
40°	1549.2	1561.9
42.5°	1529.5	1538.5
45°	1498.8	1509.7
47.5°	1459.2	1466.4
50°	1408.8	1415.9
52.5°	1345.7	1347.5
55°	1270.1	1277.3
57.5°	1189.0	1190.8
60°	1098.9	1104.3
62.5°	1003.5	1003.5
65°	902.6	906.1
67.5°	798.1	807.0
70°	691.8	693.6
72.5°	587.3	587.3
75°	479.2	481.0
77.5°	376.5	376.5
80°	279.2	281.0
82.5°	192.8	196.3
85°	120.7	120.7
87.5°	55.9	50.4
90°	42.4	42.4
92.5°	170.0	136.3
95°	592.7	490.5
97.5°	1420.2	1225.6
100°	2046.2	1814.3
102.5°	2662.0	2463.5
105°	3447.1	3340.4
107.5°	3961.5	3987.3
110°	4157.6	4268.8



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	4175.1	4345.9
115°	4064.4	4301.2
117.5°	3829.6	4092.3
120°	3640.4	3895.7
122.5°	3456.2	3707.9
125°	3193.4	3425.3
127.5°	2957.1	3152.8
130°	2817.8	2998.6
132.5°	2691.5	2853.4
135°	2518.2	2657.8
137.5°	2379.4	2493.6
140°	2284.1	2390.8
142.5°	2205.1	2296.9
145°	2086.7	2156.2
147.5°	1995.8	2053.4
150°	1938.6	1985.3
152.5°	1889.6	1924.9
155°	1833.4	1856.8
157.5°	1789.0	1805.4
160°	1762.4	1771.9
162.5°	1745.1	1754.0
165°	1720.0	1729.4
167.5°	1702.0	1705.9
170°	1697.1	1697.1
172.5°	1683.7	1680.2
175°	1675.8	1675.8
177.5°	1668.6	1664.7
180°	1664.7	1664.7



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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	0.55	1.26	1.66	2.38	3.92	13.74	14.46	14.86	15.57	17.11
	3H	1.24	1.88	2.36	3.01	4.57	15.57	16.22	16.70	17.34	18.90
	4H	1.53	2.14	2.67	3.27	4.83	16.22	16.83	17.35	17.95	19.51
	6H	1.77	2.34	2.92	3.46	5.04	16.64	17.20	17.78	18.33	19.91
	8H	1.84	2.37	2.98	3.51	5.08	16.76	17.30	17.91	18.44	20.01
	12H	1.85	2.36	3.00	3.49	5.09	16.83	17.34	17.98	18.47	20.06
4H	2H	7.75	8.36	8.89	9.49	11.05	14.00	14.61	15.14	15.73	17.29
	3H	9.31	9.82	10.45	10.97	12.54	16.03	16.54	17.18	17.69	19.27
	4H	9.39	9.86	10.54	11.00	12.60	16.80	17.27	17.95	18.40	20.00
	6H	9.40	9.80	10.55	10.96	12.55	17.33	17.73	18.49	18.89	20.48
	8H	9.37	9.75	10.52	10.90	12.50	17.49	17.87	18.65	19.02	20.63
	12H	9.32	9.66	10.49	10.82	12.43	17.58	17.92	18.75	19.09	20.70
8H	4H	10.83	11.21	11.99	12.36	13.96	16.84	17.22	18.00	18.37	19.98
	6H	11.06	11.38	12.24	12.57	14.17	17.47	17.78	18.65	18.98	20.58
	8H	11.08	11.35	12.26	12.52	14.15	17.69	17.96	18.87	19.13	20.76
	12H	11.04	11.28	12.23	12.45	14.11	17.83	18.07	19.02	19.24	20.90
12H	4H	10.97	11.31	12.14	12.47	14.08	16.79	17.13	17.96	18.29	19.90
	6H	11.32	11.60	12.50	12.77	14.39	17.45	17.72	18.63	18.90	20.52
	8H	11.39	11.62	12.57	12.79	14.45	17.68	17.92	18.86	19.09	20.74