

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: P937655

Luminaire Tested: SQ4-FB-100U-100D-93050-1D-UNV-STD-W-12-4000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P937655
REPORT IS A COMBINATION OF REPORTS P933559 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-100U-100D-93050-1D-UNV-STD-W-12-4000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

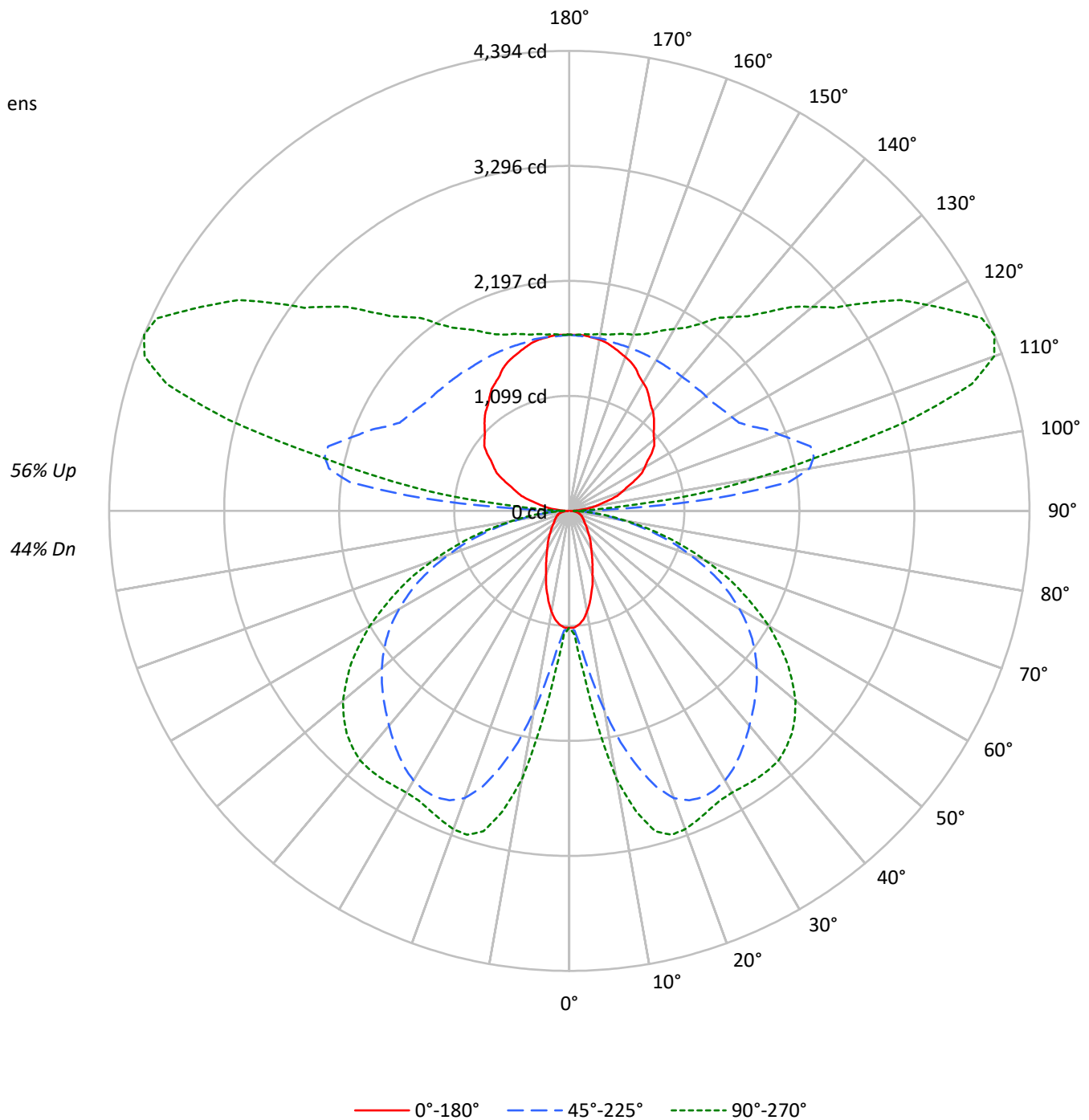
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19547.9 lumens
Efficiency: N/A
Efficacy: 112.3 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: General Diffuse

Input Watts (W): 174
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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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44				44
1	96	91	87	84	88	84	80	77	69	67	65	56	55	53	44	43	42	36				36
2	87	79	73	68	79	73	67	63	60	56	53	49	46	43	38	36	34	30				30
3	79	69	62	56	72	63	57	52	53	48	44	43	39	36	33	31	29	24				24
4	72	61	53	46	65	56	49	43	46	41	37	38	34	30	29	27	24	20				20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17				17
6	60	48	40	34	55	44	37	31	37	31	27	30	26	22	24	20	18	15				15
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13				13
8	51	39	31	26	47	36	29	24	30	24	20	25	20	17	19	16	14	11				11
9	48	35	28	23	44	33	26	21	27	22	18	22	18	15	18	15	12	10				10
10	44	32	25	20	41	30	23	19	25	20	16	21	16	14	16	13	11	9				9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3451	3451	3451
5°	3373	3990	4639
10°	3061	5818	7691
15°	2602	7602	9287
20°	2119	8812	9464
25°	1768	9223	9272
30°	1492	9284	9254
35°	1320	9132	9494
40°	1151	8934	9741
45°	1043	8790	9779
50°	957	8661	9617
55°	918	8471	9191
60°	940	8103	8518
65°	980	7541	7593
70°	1047	6581	6415
75°	1165	5370	5006
80°	1281	3729	3373
85°	1160	1981	1727

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9779 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.3	0.7
10°-20°	639.7	3.3
20°-30°	1118.9	5.7
30°-40°	1440.3	7.4
40°-50°	1608.8	8.2
50°-60°	1540.9	7.9
60°-70°	1221.1	6.2
70°-80°	718.1	3.7
80°-90°	205.9	1.1
90°-100°	820.3	4.2
100°-110°	2156.7	11.0
110°-120°	2236.3	11.4
120°-130°	1793.8	9.2
130°-140°	1407.5	7.2
140°-150°	1080.3	5.5
150°-160°	778.0	4.0
160°-170°	476.0	2.4
170°-180°	160.8	0.8
0°-30°	1902.9	9.7
0°-40°	3343.2	17.1
0°-60°	6492.9	33.2
0°-90°	8638.0	44.2
90°-120°	5213.4	26.7
90°-150°	9495.0	48.6
90°-180°	10910.0	55.8
0°-180°	19547.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1087	1166	1313	1485	1539	100
15°	814	1503	2533	3071	3168	227
25°	520	1704	3017	3150	3154	240
35°	352	1629	2842	3003	3121	220
45°	240	1299	2511	2877	3006	186
55°	172	825	2131	2476	2544	157
65°	136	438	1582	1780	1805	135
75°	100	269	868	954	958	105
85°	36	83	215	237	240	38
90°	11	32	86	43	43	12
95°	108	425	1413	728	496	120
105°	389	588	2384	3620	3377	412
115°	690	838	1910	3810	4348	682
125°	960	1076	1737	2936	3463	852
135°	1144	1259	1683	2370	2687	885
145°	1327	1412	1662	2022	2180	831
155°	1500	1542	1662	1824	1877	689
165°	1618	1640	1662	1727	1748	457
175°	1683	1683	1673	1694	1694	160
180°	1683	1683	1683	1683	1683	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8	1115.8
2.5°	1115.8	1115.8	1122.9	1126.6	1133.7	1137.3	1144.5	1151.6	1173.2	1176.8	1184.0
5°	1087.1	1101.4	1148.1	1166.0	1216.3	1284.4	1313.1	1359.7	1456.6	1485.3	1503.2
7.5°	1044.0	1076.3	1191.1	1219.8	1345.3	1524.7	1600.1	1700.5	1854.9	1930.2	1991.2
10°	975.9	1044.0	1248.5	1316.6	1521.2	1793.8	1933.8	2073.7	2306.9	2410.9	2450.4
12.5°	900.5	1011.7	1309.5	1402.8	1697.0	2095.2	2263.8	2418.1	2683.6	2823.6	2845.0
15°	814.4	965.1	1366.9	1503.2	1883.5	2346.4	2532.9	2723.1	2970.6	3071.0	3096.2
17.5°	739.1	929.2	1420.7	1564.2	2027.0	2572.4	2762.6	2920.4	3121.3	3189.4	3207.4
20°	645.7	871.9	1456.6	1643.1	2177.7	2737.4	2920.4	3042.3	3178.7	3221.7	3228.9
22.5°	577.6	810.8	1478.1	1671.8	2278.2	2837.9	2992.1	3089.0	3182.3	3196.7	3200.2
25°	520.2	742.7	1474.5	1704.1	2364.3	2898.9	3017.3	3089.0	3142.8	3150.0	3150.0
27.5°	466.4	667.3	1460.2	1711.3	2428.9	2913.2	3006.5	3056.7	3081.8	3096.2	3096.2
30°	419.7	595.6	1424.3	1697.0	2457.6	2898.9	2974.2	2999.3	3024.4	3046.0	3056.7
32.5°	383.9	527.3	1370.5	1668.3	2461.1	2863.0	2916.8	2931.2	2967.0	3017.3	3035.2
35°	351.6	459.2	1309.5	1628.8	2439.6	2805.5	2841.5	2855.8	2927.6	3002.9	3028.0
37.5°	319.3	409.0	1230.6	1560.7	2407.4	2737.4	2762.6	2787.6	2898.9	2988.6	3017.3
40°	287.0	366.0	1137.3	1485.3	2357.1	2654.9	2676.4	2715.8	2863.0	2967.0	2995.7
42.5°	261.9	330.1	1036.9	1406.3	2292.5	2561.6	2593.9	2651.3	2819.9	2931.2	2963.4
45°	240.4	294.2	929.2	1298.7	2210.0	2464.8	2511.4	2590.3	2769.7	2877.3	2906.0
47.5°	218.9	269.1	818.0	1187.6	2120.3	2367.9	2428.9	2518.5	2701.5	2805.5	2830.7
50°	200.9	243.9	706.7	1069.2	2023.5	2263.8	2335.6	2428.9	2615.5	2712.3	2744.6
52.5°	186.6	222.4	602.7	950.8	1912.2	2156.2	2238.7	2335.6	2511.4	2604.7	2626.2
55°	172.3	204.5	513.0	825.1	1797.5	2041.4	2131.1	2224.3	2396.6	2475.5	2489.8
57.5°	165.0	190.2	437.7	706.7	1675.5	1912.2	2012.7	2098.8	2260.3	2321.2	2335.6
60°	154.2	179.4	380.3	606.3	1542.7	1790.2	1876.4	1962.5	2098.8	2149.0	2159.8
62.5°	143.5	172.3	337.3	509.4	1406.3	1646.8	1732.8	1811.8	1926.6	1962.5	1976.8
65°	136.3	165.0	304.9	437.7	1266.5	1496.1	1582.1	1650.4	1743.6	1779.5	1786.7
67.5°	129.2	157.9	279.9	376.7	1126.6	1345.3	1410.0	1474.5	1546.3	1582.1	1585.8
70°	118.4	150.7	258.3	333.6	983.0	1173.2	1227.0	1295.2	1352.6	1370.5	1381.3
72.5°	111.2	139.9	243.9	301.3	835.9	1008.2	1058.4	1097.9	1148.1	1166.0	1166.0
75°	100.5	125.5	229.6	269.1	685.2	825.1	868.2	907.7	947.2	954.3	943.5
77.5°	89.7	111.2	197.3	226.0	534.6	653.0	688.8	710.4	742.7	749.8	753.5
80°	75.3	96.9	154.2	175.8	387.5	480.7	505.9	523.8	552.5	552.5	559.7
82.5°	57.4	75.3	111.2	125.5	261.9	330.1	351.6	362.3	380.3	380.3	380.3
85°	35.8	46.6	71.8	82.6	157.9	200.9	215.2	218.9	233.2	236.8	236.8
87.5°	17.9	25.1	46.6	50.2	82.6	104.0	104.0	111.2	111.2	107.6	104.0
90°	11.3	20.4	29.3	31.6	49.7	73.8	85.8	76.3	57.2	42.9	42.9
92.5°	45.2	121.9	198.8	218.0	306.5	424.4	483.4	423.7	304.2	214.6	206.1
95°	108.4	249.0	389.6	424.7	754.1	1193.4	1413.0	1260.9	956.7	728.5	702.6
97.5°	187.5	311.5	435.5	466.5	1015.8	1748.1	2114.4	2018.2	1826.0	1681.8	1632.6
100°	248.5	360.9	473.3	501.5	1111.0	1923.7	2330.2	2337.2	2351.2	2361.7	2303.2
102.5°	300.4	405.3	510.2	536.5	1154.7	1979.0	2391.2	2513.6	2758.6	2942.3	2892.1
105°	388.6	477.4	566.3	588.4	1187.1	1985.3	2384.4	2659.0	3208.2	3620.0	3593.0
107.5°	478.9	561.7	644.6	665.3	1193.1	1896.9	2248.8	2631.8	3397.9	3972.4	3978.9
110°	539.9	614.7	689.5	708.2	1184.0	1818.6	2135.8	2564.0	3420.4	4062.7	4090.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	599.8	671.1	742.3	760.2	1184.5	1750.2	2033.1	2471.4	3347.8	4005.2	4048.3
115°	690.1	755.9	821.6	838.1	1195.4	1671.7	1910.0	2332.1	3176.5	3809.7	3869.6
117.5°	779.3	839.1	898.8	913.8	1217.6	1622.7	1825.3	2206.2	2968.3	3539.8	3606.2
120°	831.3	887.5	943.8	957.8	1235.7	1606.2	1791.4	2139.5	2835.8	3358.0	3422.5
122.5°	882.2	938.9	995.6	1009.8	1261.7	1597.5	1765.4	2078.9	2705.9	3176.1	3239.8
125°	960.1	1011.8	1063.5	1076.4	1296.6	1590.4	1737.2	2003.5	2536.1	2935.5	2994.1
127.5°	1023.3	1075.5	1127.7	1140.8	1331.7	1586.2	1713.5	1942.1	2399.4	2742.4	2791.8
130°	1057.2	1113.4	1169.6	1183.7	1357.3	1588.7	1704.4	1908.0	2315.1	2620.4	2666.2
132.5°	1092.3	1148.5	1204.7	1218.7	1377.9	1590.3	1696.5	1878.7	2243.2	2516.5	2557.4
135°	1144.2	1195.4	1246.6	1259.4	1400.6	1588.8	1683.0	1835.6	2140.7	2369.6	2404.9
137.5°	1197.3	1247.9	1298.6	1311.3	1434.4	1598.6	1680.7	1809.7	2067.7	2261.3	2290.1
140°	1241.3	1288.0	1334.7	1346.3	1455.1	1600.2	1672.7	1784.2	2007.1	2174.3	2201.3
142.5°	1275.2	1318.4	1361.5	1372.3	1472.4	1605.9	1672.7	1770.7	1966.5	2113.3	2136.5
145°	1327.1	1364.8	1402.5	1411.9	1495.1	1606.0	1661.5	1741.5	1901.7	2021.8	2039.3
147.5°	1379.1	1415.8	1452.4	1461.6	1528.2	1617.1	1661.5	1724.5	1850.5	1945.0	1959.6
150°	1413.0	1446.1	1479.2	1487.5	1545.6	1622.9	1661.5	1714.7	1821.1	1900.9	1912.7
152.5°	1448.0	1473.1	1498.2	1504.5	1556.8	1626.6	1661.5	1707.0	1797.7	1865.9	1874.8
155°	1499.9	1518.5	1537.1	1541.8	1581.7	1634.9	1661.5	1697.6	1769.9	1824.1	1830.0
157.5°	1538.3	1556.4	1574.5	1579.1	1606.6	1643.2	1661.5	1689.6	1745.8	1788.0	1792.1
160°	1564.3	1578.4	1592.4	1596.0	1617.8	1646.9	1661.5	1685.6	1733.7	1769.9	1772.2
162.5°	1590.3	1600.8	1611.4	1614.0	1629.8	1650.9	1661.5	1681.8	1722.4	1752.9	1755.2
165°	1618.5	1628.0	1637.6	1640.0	1647.1	1656.7	1661.5	1676.1	1705.1	1727.0	1729.3
167.5°	1644.5	1649.0	1653.5	1654.7	1660.7	1668.8	1672.7	1682.3	1701.4	1715.7	1716.7
170°	1661.5	1666.0	1670.6	1671.7	1672.0	1672.5	1672.7	1682.3	1701.4	1715.7	1715.7
172.5°	1670.5	1671.5	1672.5	1672.7	1672.7	1672.7	1672.7	1680.3	1695.4	1706.7	1705.8
175°	1683.0	1683.0	1683.0	1683.0	1679.5	1675.0	1672.7	1677.5	1687.0	1694.2	1694.2
177.5°	1683.0	1683.0	1683.0	1683.0	1680.3	1676.8	1675.0	1678.8	1686.3	1691.9	1690.9
180°	1683.0	1683.0	1683.0	1683.0	1683.0	1683.0	1683.0	1683.0	1683.0	1683.0	1683.0



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	1115.8	1115.8
2.5°	1191.1	1184.0
5°	1532.0	1539.1
7.5°	2063.0	2059.3
10°	2565.2	2597.5
12.5°	2931.2	2938.3
15°	3153.6	3168.0
17.5°	3239.7	3243.3
20°	3243.3	3236.1
22.5°	3203.8	3196.7
25°	3157.2	3153.6
27.5°	3114.1	3117.7
30°	3096.2	3107.0
32.5°	3096.2	3114.1
35°	3103.3	3121.3
37.5°	3099.7	3121.3
40°	3085.4	3110.5
42.5°	3046.0	3063.9
45°	2984.9	3006.5
47.5°	2906.0	2920.4
50°	2805.5	2819.9
52.5°	2680.0	2683.6
55°	2529.3	2543.7
57.5°	2367.9	2371.4
60°	2188.5	2199.3
62.5°	1998.3	1998.3
65°	1797.5	1804.6
67.5°	1589.4	1607.3
70°	1377.7	1381.3
72.5°	1169.6	1169.6
75°	954.3	957.9
77.5°	749.8	749.8
80°	556.1	559.7
82.5°	383.9	391.0
85°	240.4	240.4
87.5°	111.2	100.5
90°	42.9	42.9
92.5°	171.9	137.8
95°	599.2	495.8
97.5°	1435.9	1239.1
100°	2068.7	1834.3
102.5°	2691.3	2490.6
105°	3485.1	3377.2
107.5°	4005.1	4031.1
110°	4203.3	4315.8



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	4221.0	4393.7
115°	4109.1	4348.5
117.5°	3871.7	4137.3
120°	3680.5	3938.5
122.5°	3494.2	3748.7
125°	3228.5	3463.0
127.5°	2989.7	3187.4
130°	2848.8	3031.6
132.5°	2721.1	2884.7
135°	2545.9	2687.1
137.5°	2405.6	2521.1
140°	2309.2	2417.1
142.5°	2229.3	2322.2
145°	2109.7	2179.9
147.5°	2017.8	2076.0
150°	1959.9	2007.1
152.5°	1910.4	1946.1
155°	1853.6	1877.2
157.5°	1808.7	1825.3
160°	1781.8	1791.4
162.5°	1764.2	1773.3
165°	1738.9	1748.4
167.5°	1720.7	1724.7
170°	1715.7	1715.7
172.5°	1702.2	1698.7
175°	1694.2	1694.2
177.5°	1686.9	1683.0
180°	1683.0	1683.0



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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	4.76	5.60	5.76	6.62	7.97	17.95	18.79	18.95	19.81	21.16
	3H	5.46	6.22	6.47	7.24	8.61	19.79	20.55	20.80	21.58	22.94
	4H	5.76	6.48	6.78	7.51	8.88	20.44	21.16	21.46	22.19	23.56
	6H	6.01	6.67	7.04	7.70	9.09	20.88	21.54	21.91	22.57	23.96
	8H	6.08	6.71	7.11	7.76	9.14	21.00	21.63	22.04	22.68	24.06
	12H	6.09	6.69	7.14	7.74	9.15	21.07	21.67	22.11	22.71	24.12
4H	2H	11.98	12.70	13.01	13.73	15.10	18.22	18.94	19.25	19.97	21.34
	3H	13.55	14.15	14.58	15.20	16.59	20.27	20.87	21.31	21.93	23.32
	4H	13.64	14.19	14.68	15.24	16.65	21.04	21.59	22.09	22.64	24.05
	6H	13.65	14.12	14.70	15.19	16.60	21.58	22.06	22.64	23.13	24.54
	8H	13.63	14.07	14.68	15.13	16.56	21.75	22.19	22.80	23.26	24.68
	12H	13.58	13.98	14.65	15.06	16.49	21.84	22.25	22.92	23.32	24.75
8H	4H	15.09	15.53	16.14	16.59	18.02	21.10	21.54	22.15	22.61	24.03
	6H	15.33	15.70	16.41	16.80	18.22	21.73	22.10	22.81	23.20	24.63
	8H	15.35	15.67	16.43	16.76	18.20	21.96	22.28	23.04	23.37	24.81
	12H	15.31	15.60	16.40	16.68	18.16	22.10	22.39	23.19	23.47	24.95
12H	4H	15.23	15.63	16.30	16.71	18.14	21.05	21.45	22.13	22.53	23.96
	6H	15.59	15.91	16.67	17.00	18.44	21.72	22.04	22.80	23.13	24.57
	8H	15.66	15.94	16.75	17.02	18.50	21.95	22.23	23.04	23.32	24.80