

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: P938420

Luminaire Tested: SQ4-FB-150U-100D-840-1D-UNV-STD-W-8

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938420
REPORT IS A COMBINATION OF REPORTS P933647 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-150U-100D-840-1D-UNV-STD-W-8
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

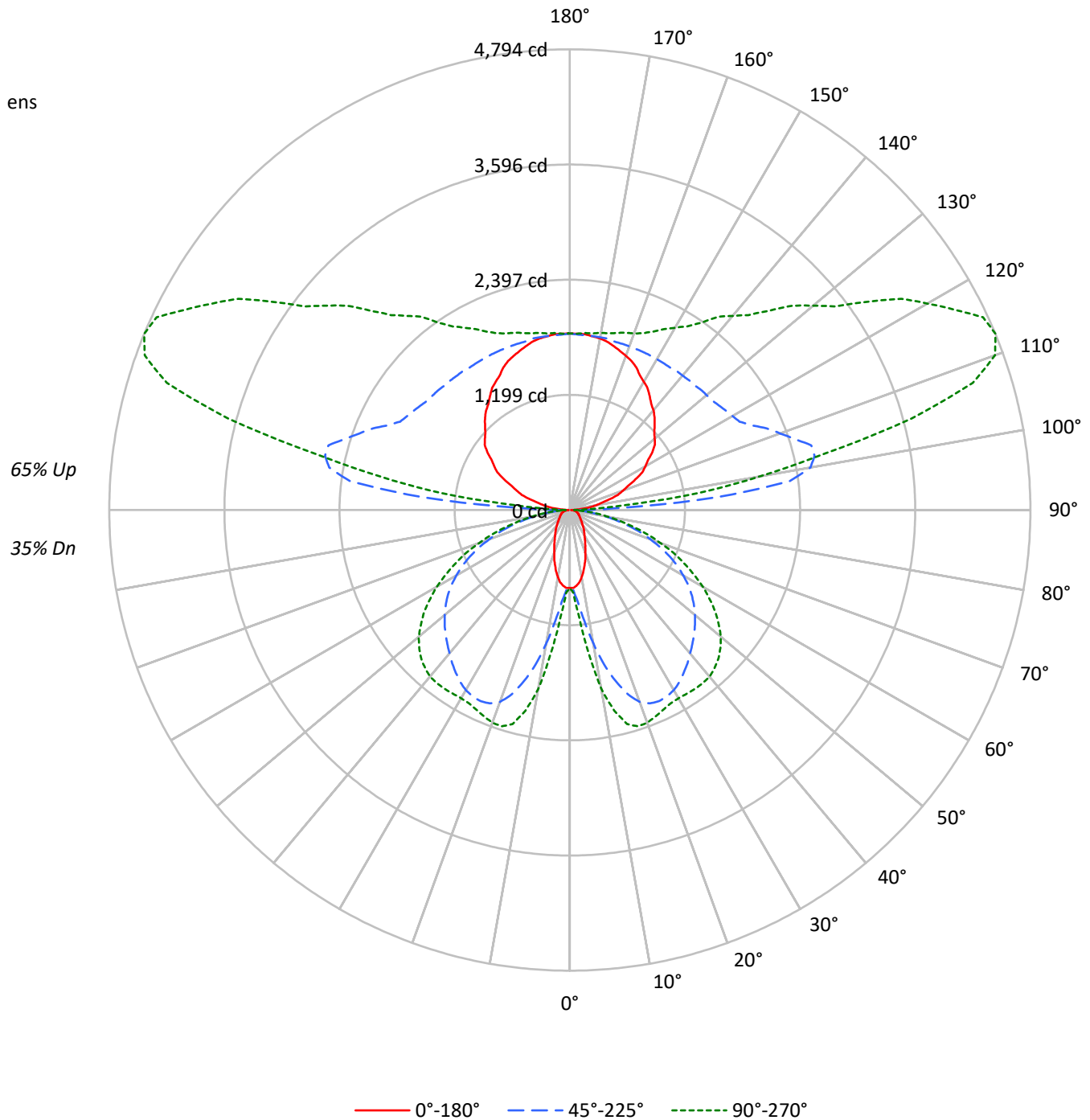
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18193.0 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 8' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 144.8
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				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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35				35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	28				28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	23				23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	19				19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16				16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14				14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	12				12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10				10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9				9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8				8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7				7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3767	3767	3767
5°	3680	4354	5064
10°	3339	6347	8395
15°	2837	8292	10137
20°	2310	9610	10331
25°	1927	10056	10121
30°	1625	10120	10102
35°	1437	9952	10363
40°	1252	9733	10634
45°	1134	9573	10675
50°	1040	9430	10498
55°	996	9219	10033
60°	1019	8814	9299
65°	1061	8198	8289
70°	1131	7150	7002
75°	1252	5829	5464
80°	1367	4042	3683
85°	1216	2145	1885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10675 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.0	0.6
10°-20°	465.5	2.6
20°-30°	814.3	4.5
30°-40°	1048.2	5.8
40°-50°	1170.8	6.4
50°-60°	1121.4	6.2
60°-70°	888.7	4.9
70°-80°	522.6	2.9
80°-90°	152.2	0.8
90°-100°	895.1	4.9
100°-110°	2353.4	12.9
110°-120°	2440.2	13.4
120°-130°	1957.3	10.8
130°-140°	1535.8	8.4
140°-150°	1178.8	6.5
150°-160°	848.9	4.7
160°-170°	519.4	2.9
170°-180°	175.5	1.0
0°-30°	1384.8	7.6
0°-40°	2433.1	13.4
0°-60°	4725.3	26.0
0°-90°	6288.7	34.6
90°-120°	5688.7	31.3
90°-150°	10360.5	56.9
90°-180°	11904.0	65.4
0°-180°	18193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	812	812	812	812	812	
5°	791	849	956	1081	1120	73
15°	593	1094	1843	2235	2306	165
25°	379	1240	2196	2292	2295	174
35°	256	1185	2068	2185	2272	160
45°	175	945	1828	2094	2188	135
55°	125	600	1551	1802	1851	114
65°	99	318	1151	1295	1313	98
75°	73	196	632	695	697	77
85°	26	60	157	172	175	28
90°	12	34	94	47	47	12
95°	118	463	1542	795	541	131
105°	424	642	2602	3950	3685	449
115°	753	914	2084	4157	4745	744
125°	1048	1174	1896	3203	3779	930
135°	1248	1374	1836	2586	2932	966
145°	1448	1541	1813	2206	2379	907
155°	1637	1682	1813	1990	2048	752
165°	1766	1790	1813	1884	1908	498
175°	1836	1836	1825	1849	1849	174
180°	1836	1836	1836	1836	1836	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0	812.0
2.5°	812.0	812.0	817.3	819.8	825.1	827.6	832.9	838.1	853.8	856.4	861.6
5°	791.1	801.6	835.6	848.6	885.1	934.7	955.6	989.6	1060.0	1081.0	1094.0
7.5°	759.8	783.3	866.9	887.7	979.1	1109.6	1164.5	1237.6	1349.9	1404.7	1449.1
10°	710.2	759.8	908.7	958.3	1107.1	1305.4	1407.3	1509.2	1678.8	1754.6	1783.2
12.5°	655.3	736.3	953.0	1020.9	1235.0	1524.8	1647.5	1759.8	1953.0	2054.8	2070.5
15°	592.7	702.4	994.8	1094.0	1370.8	1707.6	1843.3	1981.7	2161.8	2235.0	2253.2
17.5°	537.9	676.3	1033.9	1138.4	1475.2	1872.1	2010.5	2125.3	2271.5	2321.1	2334.2
20°	470.0	634.5	1060.0	1195.8	1584.9	1992.2	2125.3	2214.1	2313.3	2344.6	2349.9
22.5°	420.4	590.0	1075.7	1216.7	1658.0	2065.3	2177.6	2248.0	2316.0	2326.3	2329.0
25°	378.6	540.4	1073.1	1240.2	1720.6	2109.7	2195.8	2248.0	2287.2	2292.5	2292.5
27.5°	339.4	485.6	1062.7	1245.5	1767.6	2120.1	2188.0	2224.6	2242.9	2253.2	2253.2
30°	305.5	433.4	1036.5	1235.0	1788.5	2109.7	2164.5	2182.8	2201.1	2216.7	2224.6
32.5°	279.4	383.8	997.4	1214.1	1791.1	2083.6	2122.7	2133.2	2159.3	2195.8	2208.9
35°	255.9	334.2	953.0	1185.4	1775.4	2041.8	2067.9	2078.4	2130.5	2185.4	2203.6
37.5°	232.4	297.7	895.5	1135.8	1751.9	1992.2	2010.5	2028.8	2109.7	2174.9	2195.8
40°	208.9	266.4	827.6	1081.0	1715.4	1932.1	1947.7	1976.5	2083.6	2159.3	2180.1
42.5°	190.6	240.2	754.5	1023.5	1668.4	1864.3	1887.8	1929.5	2052.2	2133.2	2156.7
45°	175.0	214.1	676.3	945.1	1608.4	1793.7	1827.7	1885.1	2015.6	2094.0	2114.9
47.5°	159.3	195.8	595.3	864.2	1543.1	1723.3	1767.6	1832.9	1966.0	2041.8	2060.1
50°	146.2	177.5	514.4	778.0	1472.6	1647.5	1699.8	1767.6	1903.4	1973.9	1997.3
52.5°	135.8	161.8	438.7	691.9	1391.6	1569.1	1629.2	1699.8	1827.7	1895.6	1911.2
55°	125.3	148.8	373.4	600.5	1308.1	1485.7	1550.9	1618.8	1744.1	1801.5	1812.0
57.5°	120.1	138.4	318.5	514.4	1219.3	1391.6	1464.7	1527.4	1644.9	1689.3	1699.8
60°	112.2	130.5	276.7	441.2	1122.8	1302.9	1365.5	1428.2	1527.4	1564.0	1571.8
62.5°	104.4	125.3	245.4	370.8	1023.5	1198.4	1261.1	1318.6	1402.1	1428.2	1438.6
65°	99.2	120.1	221.9	318.5	921.7	1088.8	1151.4	1201.0	1268.9	1295.1	1300.3
67.5°	94.0	114.9	203.6	274.2	819.8	979.1	1026.1	1073.1	1125.3	1151.4	1154.1
70°	86.2	109.7	188.0	242.9	715.4	853.8	893.0	942.6	984.3	997.4	1005.2
72.5°	80.9	101.9	177.5	219.3	608.3	733.7	770.2	799.0	835.6	848.6	848.6
75°	73.1	91.4	167.1	195.8	498.7	600.5	631.8	660.6	689.3	694.6	686.7
77.5°	65.3	80.9	143.6	164.5	389.1	475.2	501.3	516.9	540.4	545.7	548.3
80°	54.8	70.5	112.2	127.9	282.0	349.9	368.1	381.2	402.1	402.1	407.4
82.5°	41.8	54.8	80.9	91.4	190.6	240.2	255.9	263.7	276.7	276.7	276.7
85°	26.1	34.0	52.3	60.1	114.9	146.2	156.7	159.3	169.7	172.3	172.3
87.5°	13.0	18.3	34.0	36.6	60.1	75.7	75.7	80.9	80.9	78.3	75.7
90°	12.4	22.2	32.0	34.5	54.2	80.5	93.7	83.3	62.4	46.8	46.8
92.5°	49.3	133.1	217.0	237.9	334.4	463.2	527.5	462.3	332.0	234.2	224.9
95°	118.4	271.7	425.0	463.4	822.8	1302.1	1541.8	1375.8	1043.9	794.9	766.7
97.5°	204.6	339.9	475.2	509.0	1108.4	1907.6	2307.2	2202.3	1992.5	1835.1	1781.5
100°	271.1	393.8	516.5	547.3	1212.4	2099.1	2542.5	2550.2	2565.5	2577.0	2513.1
102.5°	327.8	442.3	556.7	585.4	1260.0	2159.4	2609.1	2742.8	3010.0	3210.5	3155.8
105°	424.0	520.9	617.9	642.1	1295.3	2166.2	2601.7	2901.4	3500.6	3950.0	3920.6
107.5°	522.6	613.0	703.3	725.9	1301.9	2069.9	2453.8	2871.7	3707.7	4334.6	4341.7
110°	589.1	670.8	752.4	772.7	1292.0	1984.4	2330.6	2797.8	3732.3	4433.2	4463.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	654.5	732.2	810.0	829.4	1292.4	1909.7	2218.4	2696.5	3652.9	4370.2	4417.3
115°	753.1	824.8	896.5	914.5	1304.4	1824.1	2084.1	2544.7	3466.0	4157.0	4222.3
117.5°	850.4	915.6	980.8	997.1	1328.6	1770.6	1991.6	2407.4	3238.9	3862.5	3934.9
120°	907.1	968.4	1029.8	1045.1	1348.3	1752.5	1954.7	2334.5	3094.3	3664.1	3734.4
122.5°	962.5	1024.5	1086.3	1101.8	1376.7	1743.1	1926.3	2268.3	2952.5	3465.6	3535.1
125°	1047.6	1104.0	1160.4	1174.5	1414.8	1735.2	1895.5	2186.0	2767.2	3203.1	3267.0
127.5°	1116.6	1173.5	1230.6	1244.8	1453.1	1730.8	1869.6	2119.1	2618.1	2992.4	3046.3
130°	1153.6	1214.9	1276.3	1291.6	1481.0	1733.4	1859.7	2081.8	2526.1	2859.3	2909.2
132.5°	1191.8	1253.2	1314.5	1329.8	1503.6	1735.3	1851.1	2049.9	2447.6	2745.8	2790.5
135°	1248.4	1304.4	1360.3	1374.2	1528.2	1733.6	1836.3	2002.9	2335.9	2585.7	2624.1
137.5°	1306.4	1361.8	1417.0	1430.8	1565.2	1744.3	1833.9	1974.7	2256.2	2467.3	2498.8
140°	1354.4	1405.4	1456.3	1469.1	1587.8	1746.1	1825.2	1946.9	2190.1	2372.5	2401.9
142.5°	1391.4	1438.5	1485.7	1497.4	1606.7	1752.4	1825.2	1932.0	2145.6	2305.9	2331.2
145°	1448.1	1489.2	1530.3	1540.6	1631.4	1752.4	1812.9	1900.2	2075.0	2206.1	2225.3
147.5°	1504.8	1544.8	1584.9	1594.8	1667.5	1764.5	1812.9	1881.6	2019.1	2122.2	2138.1
150°	1541.8	1577.9	1614.1	1623.1	1686.3	1770.7	1812.9	1871.0	1987.1	2074.2	2087.1
152.5°	1580.0	1607.4	1634.8	1641.7	1698.8	1774.8	1812.9	1862.5	1961.6	2036.0	2045.7
155°	1636.7	1657.0	1677.2	1682.3	1725.8	1783.8	1812.9	1852.3	1931.2	1990.4	1996.8
157.5°	1678.6	1698.4	1718.0	1723.0	1752.9	1792.9	1812.9	1843.6	1905.0	1951.0	1955.5
160°	1707.0	1722.3	1737.6	1741.4	1765.3	1797.0	1812.9	1839.2	1891.8	1931.2	1933.8
162.5°	1735.3	1746.8	1758.3	1761.2	1778.4	1801.4	1812.9	1835.1	1879.5	1912.8	1915.2
165°	1766.0	1776.4	1786.9	1789.5	1797.3	1807.6	1812.9	1828.8	1860.6	1884.4	1887.0
167.5°	1794.4	1799.3	1804.3	1805.6	1812.1	1820.9	1825.2	1835.6	1856.5	1872.1	1873.1
170°	1812.9	1817.8	1822.8	1824.0	1824.4	1824.9	1825.2	1835.6	1856.5	1872.1	1872.1
172.5°	1822.8	1823.8	1824.9	1825.2	1825.2	1825.2	1825.2	1833.4	1849.8	1862.2	1861.2
175°	1836.3	1836.3	1836.3	1836.3	1832.6	1827.7	1825.2	1830.5	1840.8	1848.6	1848.6
177.5°	1836.3	1836.3	1836.3	1836.3	1833.4	1829.6	1827.7	1831.9	1840.1	1846.2	1845.1
180°	1836.3	1836.3	1836.3	1836.3	1836.3	1836.3	1836.3	1836.3	1836.3	1836.3	1836.3



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	812.0	812.0
2.5°	866.9	861.6
5°	1114.9	1120.1
7.5°	1501.3	1498.7
10°	1866.8	1890.3
12.5°	2133.2	2138.4
15°	2295.0	2305.5
17.5°	2357.7	2360.3
20°	2360.3	2355.1
22.5°	2331.6	2326.3
25°	2297.7	2295.0
27.5°	2266.3	2268.9
30°	2253.2	2261.1
32.5°	2253.2	2266.3
35°	2258.5	2271.5
37.5°	2255.9	2271.5
40°	2245.4	2263.7
42.5°	2216.7	2229.7
45°	2172.3	2188.0
47.5°	2114.9	2125.3
50°	2041.8	2052.2
52.5°	1950.4	1953.0
55°	1840.7	1851.2
57.5°	1723.3	1725.8
60°	1592.7	1600.6
62.5°	1454.3	1454.3
65°	1308.1	1313.3
67.5°	1156.7	1169.7
70°	1002.6	1005.2
72.5°	851.2	851.2
75°	694.6	697.1
77.5°	545.7	545.7
80°	404.7	407.4
82.5°	279.4	284.6
85°	175.0	175.0
87.5°	80.9	73.1
90°	46.8	46.8
92.5°	187.6	150.4
95°	653.9	541.0
97.5°	1566.7	1352.0
100°	2257.3	2001.5
102.5°	2936.6	2717.6
105°	3802.8	3685.0
107.5°	4370.1	4398.6
110°	4586.5	4709.2



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	4605.8	4794.2
115°	4483.6	4744.9
117.5°	4224.7	4514.5
120°	4016.0	4297.5
122.5°	3812.8	4090.5
125°	3522.9	3778.7
127.5°	3262.2	3478.0
130°	3108.5	3307.9
132.5°	2969.0	3147.7
135°	2778.1	2932.0
137.5°	2624.8	2750.8
140°	2519.7	2637.5
142.5°	2432.6	2533.9
145°	2301.9	2378.6
147.5°	2201.7	2265.2
150°	2138.6	2190.1
152.5°	2084.6	2123.5
155°	2022.6	2048.3
157.5°	1973.5	1991.6
160°	1944.3	1954.7
162.5°	1925.0	1934.9
165°	1897.5	1907.8
167.5°	1877.6	1881.9
170°	1872.1	1872.1
172.5°	1857.4	1853.6
175°	1848.6	1848.6
177.5°	1840.6	1836.3
180°	1836.3	1836.3



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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	4.01	4.77	5.08	5.85	7.32	17.18	17.95	18.26	19.02	20.50
	3H	4.70	5.39	5.79	6.47	7.96	19.02	19.70	20.10	20.79	22.28
	4H	5.00	5.65	6.09	6.73	8.23	19.66	20.31	20.75	21.39	22.89
	6H	5.24	5.84	6.34	6.93	8.44	20.08	20.68	21.18	21.77	23.28
	8H	5.31	5.88	6.41	6.98	8.49	20.20	20.77	21.31	21.88	23.38
	12H	5.32	5.86	6.43	6.96	8.49	20.26	20.81	21.38	21.91	23.43
4H	2H	11.21	11.86	12.31	12.95	14.44	17.45	18.10	18.55	19.18	20.68
	3H	12.77	13.31	13.87	14.42	15.93	19.48	20.03	20.59	21.14	22.65
	4H	12.86	13.36	13.97	14.46	15.99	20.25	20.74	21.36	21.85	23.38
	6H	12.86	13.29	13.98	14.42	15.94	20.78	21.21	21.90	22.34	23.86
	8H	12.84	13.24	13.96	14.36	15.90	20.94	21.34	22.06	22.46	24.00
	12H	12.79	13.15	13.92	14.28	15.83	21.03	21.39	22.16	22.52	24.07
8H	4H	14.29	14.69	15.41	15.81	17.35	20.30	20.70	21.42	21.82	23.36
	6H	14.53	14.86	15.67	16.02	17.56	20.92	21.25	22.06	22.41	23.95
	8H	14.55	14.84	15.69	15.98	17.54	21.14	21.43	22.29	22.57	24.13
	12H	14.51	14.77	15.66	15.90	17.50	21.28	21.53	22.43	22.67	24.27
12H	4H	14.43	14.80	15.57	15.93	17.47	20.24	20.61	21.38	21.74	23.28
	6H	14.79	15.08	15.94	16.22	17.78	20.90	21.19	22.05	22.34	23.89
	8H	14.85	15.11	16.00	16.25	17.84	21.13	21.38	22.28	22.52	24.11