

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: P938249

Luminaire Tested: SQ4-FB-150U-050D-930-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938249  
REPORT IS A COMBINATION OF REPORTS P933621 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-050D-930-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

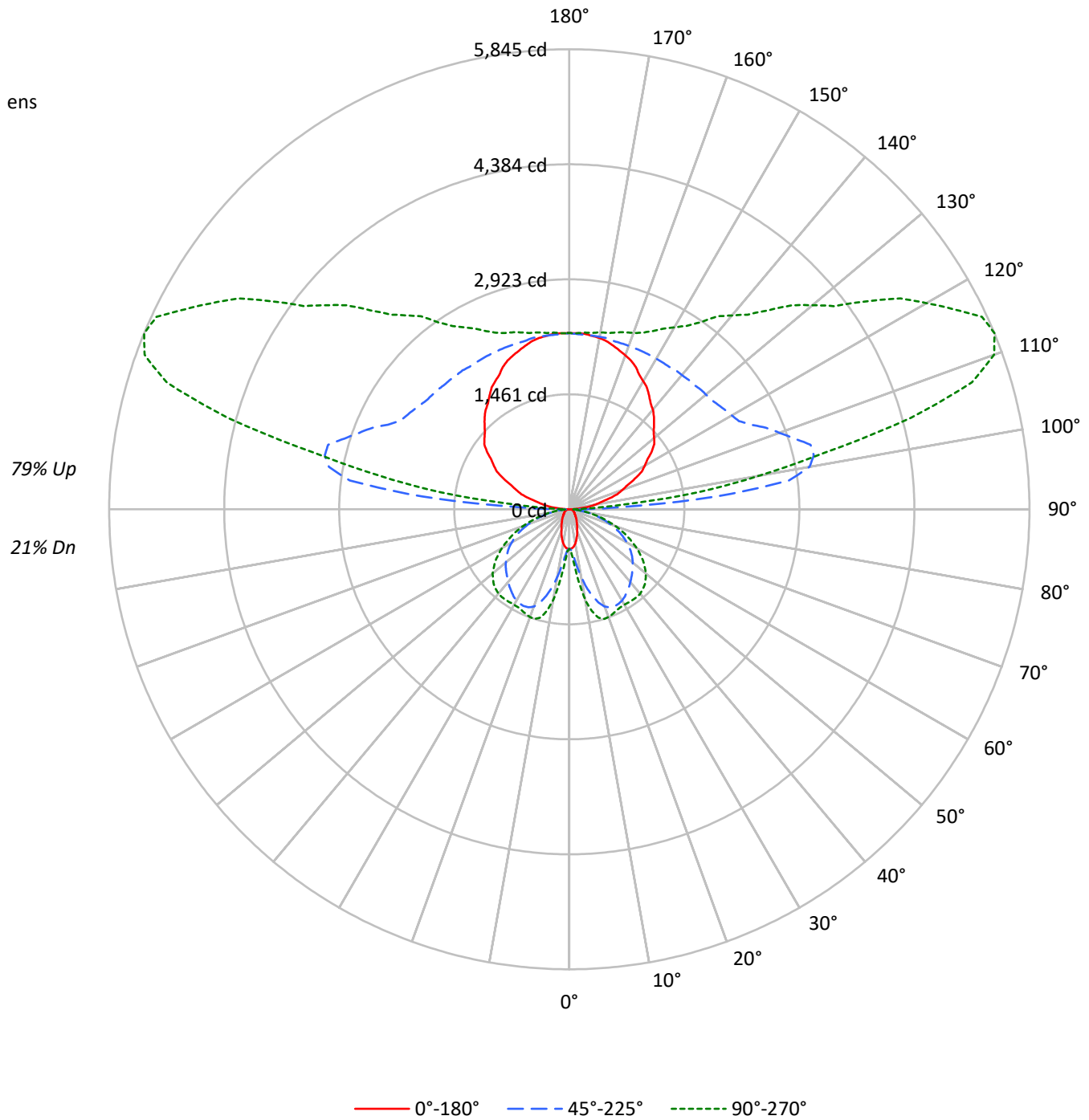
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18408.8 lumens  
Efficiency: N/A  
Efficacy: 110.4 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): 166.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	30	30	30	21
1	91	87	83	80	80	77	74	71	58	56	54	41	40	39	26	25	24	24	24	24	17
2	83	75	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	20	20	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	17	17	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	14	14	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	12	12	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	11	11	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	12	11	9	9	9	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	11	9	8	8	8	8	5
9	45	34	26	21	40	30	24	19	23	18	15	16	13	11	10	9	7	7	7	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	6	6	6	6	4

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1554	1554	1554
5°	1519	1797	2089
10°	1378	2620	3464
15°	1172	3424	4182
20°	954	3968	4262
25°	797	4154	4176
30°	672	4181	4168
35°	595	4113	4276
40°	518	4024	4387
45°	469	3959	4404
50°	431	3900	4331
55°	414	3815	4139
60°	424	3649	3836
65°	441	3396	3419
70°	471	2964	2889
75°	524	2419	2254
80°	578	1679	1519
85°	522	892	777

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 5568 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.0	0.4
10°-20°	288.1	1.6
20°-30°	503.9	2.7
30°-40°	648.7	3.5
40°-50°	724.5	3.9
50°-60°	693.9	3.8
60°-70°	550.0	3.0
70°-80°	323.4	1.8
80°-90°	98.4	0.5
90°-100°	1091.3	5.9
100°-110°	2869.0	15.6
110°-120°	2974.9	16.2
120°-130°	2386.2	13.0
130°-140°	1872.3	10.2
140°-150°	1437.1	7.8
150°-160°	1034.9	5.6
160°-170°	633.2	3.4
170°-180°	213.9	1.2
0°-30°	857.0	4.7
0°-40°	1505.7	8.2
0°-60°	2924.1	15.9
0°-90°	3895.9	21.2
90°-120°	6935.2	37.7
90°-150°	12630.8	68.6
90°-180°	14513.0	78.8
0°-180°	18408.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	490	525	591	669	693	45
15°	367	677	1141	1383	1427	102
25°	234	768	1359	1419	1420	108
35°	158	734	1280	1352	1406	99
45°	108	585	1131	1296	1354	84
55°	78	372	960	1115	1146	71
65°	61	197	713	801	813	61
75°	45	121	391	430	431	47
85°	16	37	97	107	108	17
90°	15	42	114	57	57	13
95°	144	565	1880	969	660	160
105°	517	783	3172	4816	4492	548
115°	918	1115	2541	5068	5785	907
125°	1277	1432	2311	3905	4607	1134
135°	1522	1675	2239	3152	3574	1178
145°	1766	1878	2210	2690	2900	1106
155°	1995	2051	2210	2427	2497	917
165°	2153	2182	2210	2297	2326	608
175°	2239	2239	2225	2254	2254	213
180°	2239	2239	2239	2239	2239	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	502.5	502.5	502.5	502.5	502.5	502.5	502.5	502.5	502.5	502.5	502.5
2.5°	502.5	502.5	505.7	507.3	510.5	512.2	515.4	518.7	528.4	530.0	533.2
5°	489.6	496.0	517.1	525.1	547.7	578.4	591.3	612.4	656.0	668.9	677.0
7.5°	470.2	484.7	536.4	549.3	605.9	686.7	720.6	765.9	835.4	869.2	896.7
10°	439.5	470.2	562.3	593.0	685.0	807.9	870.9	933.9	1038.9	1085.8	1103.6
12.5°	405.5	455.6	589.7	631.7	764.2	943.6	1019.6	1089.0	1208.6	1271.6	1281.3
15°	366.8	434.7	615.6	677.0	848.3	1056.7	1140.7	1226.3	1337.9	1383.1	1394.4
17.5°	332.8	418.4	639.8	704.5	912.9	1158.5	1244.1	1315.2	1405.7	1436.4	1444.5
20°	290.8	392.7	656.0	740.0	980.8	1232.8	1315.2	1370.2	1431.6	1450.9	1454.2
22.5°	260.2	365.1	665.7	753.0	1026.0	1278.1	1347.5	1391.2	1433.2	1439.6	1441.2
25°	234.3	334.4	664.1	767.5	1064.8	1305.5	1358.8	1391.2	1415.4	1418.7	1418.7
27.5°	210.1	300.6	657.6	770.7	1093.8	1312.0	1354.0	1376.6	1387.9	1394.4	1394.4
30°	189.0	268.2	641.4	764.2	1106.8	1305.5	1339.5	1350.8	1362.0	1371.8	1376.6
32.5°	172.9	237.5	617.2	751.3	1108.4	1289.4	1313.6	1320.1	1336.2	1358.8	1366.9
35°	158.4	206.9	589.7	733.5	1098.7	1263.5	1279.7	1286.2	1318.4	1352.4	1363.7
37.5°	143.8	184.2	554.2	702.9	1084.1	1232.8	1244.1	1255.4	1305.5	1345.9	1358.8
40°	129.3	164.8	512.2	668.9	1061.6	1195.7	1205.4	1223.1	1289.4	1336.2	1349.1
42.5°	118.0	148.6	466.9	633.4	1032.5	1153.7	1168.2	1194.1	1269.9	1320.1	1334.6
45°	108.2	132.5	418.4	584.9	995.3	1110.0	1131.0	1166.6	1247.4	1295.8	1308.7
47.5°	98.5	121.2	368.4	534.8	954.9	1066.4	1093.8	1134.2	1216.6	1263.5	1274.8
50°	90.5	109.9	318.3	481.5	911.2	1019.6	1051.8	1093.8	1177.9	1221.5	1236.1
52.5°	84.0	100.2	271.4	428.2	861.2	971.1	1008.2	1051.8	1131.0	1173.0	1182.7
55°	77.6	92.1	231.0	371.6	809.5	919.4	959.7	1001.7	1079.3	1114.9	1121.3
57.5°	74.4	85.6	197.1	318.3	754.6	861.2	906.4	945.2	1017.9	1045.4	1051.8
60°	69.5	80.8	171.3	273.1	694.8	806.3	845.1	883.8	945.2	967.9	972.7
62.5°	64.6	77.6	151.8	229.4	633.4	741.7	780.4	815.9	867.6	883.8	890.3
65°	61.4	74.4	137.3	197.1	570.4	673.8	712.6	743.3	785.3	801.4	804.6
67.5°	58.1	71.1	126.0	169.7	507.3	605.9	635.0	664.1	696.4	712.6	714.2
70°	53.3	67.9	116.4	150.2	442.7	528.4	552.6	583.3	609.2	617.2	622.1
72.5°	50.1	63.0	109.9	135.7	376.4	454.0	476.7	494.4	517.1	525.1	525.1
75°	45.2	56.5	103.4	121.2	308.6	371.6	391.0	408.8	426.6	429.8	424.9
77.5°	40.4	50.1	88.9	101.8	240.7	294.1	310.2	319.9	334.4	337.7	339.3
80°	34.0	43.6	69.5	79.2	174.5	216.5	227.8	235.9	248.8	248.8	252.1
82.5°	25.9	34.0	50.1	56.5	118.0	148.6	158.4	163.2	171.3	171.3	171.3
85°	16.1	21.0	32.3	37.2	71.1	90.5	96.9	98.5	105.0	106.6	106.6
87.5°	8.1	11.3	21.0	22.6	37.2	46.9	46.9	50.1	50.1	48.5	46.9
90°	15.0	27.1	39.1	42.1	66.1	98.1	114.2	101.5	76.1	57.1	57.1
92.5°	60.1	162.2	264.4	290.0	407.7	564.6	643.0	563.5	404.6	285.5	274.1
95°	144.2	331.2	518.2	564.9	1003.2	1587.5	1879.7	1677.3	1272.7	969.1	934.8
97.5°	249.4	414.3	579.3	620.6	1351.3	2325.6	2812.7	2684.8	2429.1	2237.2	2171.8
100°	330.5	480.1	629.7	667.1	1478.0	2559.1	3099.7	3109.0	3127.7	3141.7	3063.8
102.5°	399.7	539.2	678.8	713.7	1536.1	2632.6	3180.8	3343.8	3669.6	3914.1	3847.3
105°	516.9	635.1	753.3	782.8	1579.2	2640.9	3171.8	3537.1	4267.6	4815.5	4779.6
107.5°	637.1	747.3	857.4	885.0	1587.1	2523.3	2991.5	3501.0	4520.0	5284.3	5293.0
110°	718.2	817.7	917.2	942.1	1575.2	2419.2	2841.3	3410.9	4550.1	5404.5	5441.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	797.9	892.7	987.5	1011.2	1575.6	2328.2	2704.5	3287.5	4453.4	5327.9	5385.3
115°	918.1	1005.5	1093.0	1114.9	1590.2	2223.9	2540.8	3102.4	4225.5	5068.0	5147.6
117.5°	1036.8	1116.2	1195.7	1215.5	1619.7	2158.5	2428.0	2934.9	3948.6	4708.9	4797.2
120°	1105.8	1180.7	1255.4	1274.1	1643.7	2136.5	2383.0	2846.1	3772.3	4466.9	4552.8
122.5°	1173.4	1248.9	1324.4	1343.3	1678.4	2125.1	2348.5	2765.5	3599.5	4225.1	4309.7
125°	1277.2	1345.9	1414.7	1431.9	1724.9	2115.6	2310.9	2665.2	3373.6	3905.0	3983.0
127.5°	1361.2	1430.7	1500.2	1517.5	1771.4	2110.0	2279.3	2583.5	3191.8	3648.1	3713.9
130°	1406.4	1481.1	1555.9	1574.6	1805.5	2113.3	2267.3	2538.0	3079.7	3485.8	3546.6
132.5°	1452.9	1527.7	1602.5	1621.2	1833.0	2115.5	2256.8	2499.2	2984.0	3347.6	3402.1
135°	1522.0	1590.1	1658.3	1675.3	1863.1	2113.6	2238.8	2441.8	2847.8	3152.3	3199.2
137.5°	1592.7	1660.1	1727.6	1744.4	1908.2	2126.5	2235.7	2407.3	2750.6	3008.0	3046.4
140°	1651.3	1713.4	1775.5	1791.0	1935.7	2128.7	2225.2	2373.4	2670.0	2892.3	2928.2
142.5°	1696.3	1753.8	1811.2	1825.5	1958.8	2136.4	2225.2	2355.4	2615.9	2811.2	2842.1
145°	1765.5	1815.6	1865.6	1878.1	1988.8	2136.4	2210.2	2316.7	2529.7	2689.5	2712.9
147.5°	1834.5	1883.3	1932.0	1944.2	2032.9	2151.1	2210.2	2294.0	2461.6	2587.3	2606.7
150°	1879.7	1923.7	1967.8	1978.8	2055.9	2158.8	2210.2	2281.0	2422.6	2528.7	2544.4
152.5°	1926.2	1959.6	1993.0	2001.3	2070.9	2163.8	2210.2	2270.6	2391.5	2482.2	2494.0
155°	1995.4	2020.1	2044.8	2050.9	2104.0	2174.8	2210.2	2258.3	2354.5	2426.6	2434.5
157.5°	2046.4	2070.5	2094.5	2100.5	2137.0	2185.8	2210.2	2247.6	2322.4	2378.5	2384.0
160°	2081.0	2099.7	2118.4	2123.1	2152.1	2190.8	2210.2	2242.2	2306.3	2354.4	2357.6
162.5°	2115.5	2129.6	2143.5	2147.1	2168.1	2196.1	2210.2	2237.2	2291.4	2331.9	2334.9
165°	2153.1	2165.8	2178.5	2181.7	2191.1	2203.8	2210.2	2229.5	2268.2	2297.3	2300.5
167.5°	2187.7	2193.7	2199.7	2201.2	2209.2	2219.9	2225.2	2237.9	2263.3	2282.3	2283.7
170°	2210.2	2216.2	2222.2	2223.7	2224.2	2224.9	2225.2	2237.9	2263.3	2282.3	2282.3
172.5°	2222.2	2223.5	2224.9	2225.2	2225.2	2225.2	2225.2	2235.2	2255.3	2270.3	2269.1
175°	2238.8	2238.8	2238.8	2238.8	2234.3	2228.2	2225.2	2231.5	2244.2	2253.8	2253.8
177.5°	2238.8	2238.8	2238.8	2238.8	2235.2	2230.6	2228.2	2233.2	2243.3	2250.7	2249.4
180°	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8	2238.8



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	502.5	502.5
2.5°	536.4	533.2
5°	689.9	693.1
7.5°	929.1	927.5
10°	1155.3	1169.8
12.5°	1320.1	1323.3
15°	1420.3	1426.7
17.5°	1459.1	1460.7
20°	1460.7	1457.4
22.5°	1442.8	1439.6
25°	1421.9	1420.3
27.5°	1402.4	1404.1
30°	1394.4	1399.2
32.5°	1394.4	1402.4
35°	1397.6	1405.7
37.5°	1396.0	1405.7
40°	1389.5	1400.8
42.5°	1371.8	1379.9
45°	1344.3	1354.0
47.5°	1308.7	1315.2
50°	1263.5	1269.9
52.5°	1207.0	1208.6
55°	1139.1	1145.6
57.5°	1066.4	1068.0
60°	985.6	990.4
62.5°	900.0	900.0
65°	809.5	812.7
67.5°	715.8	723.8
70°	620.5	622.1
72.5°	526.8	526.8
75°	429.8	431.4
77.5°	337.7	337.7
80°	250.5	252.1
82.5°	172.9	176.1
85°	108.2	108.2
87.5°	50.1	45.2
90°	57.1	57.1
92.5°	228.7	183.3
95°	797.1	659.6
97.5°	1910.0	1648.2
100°	2752.0	2440.1
102.5°	3580.2	3313.0
105°	4636.1	4492.5
107.5°	5327.7	5362.4
110°	5591.5	5741.1





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	5615.1	5844.8
115°	5466.1	5784.7
117.5°	5150.4	5503.7
120°	4896.0	5239.3
122.5°	4648.3	4986.9
125°	4294.8	4606.7
127.5°	3977.0	4240.1
130°	3789.7	4032.7
132.5°	3619.7	3837.4
135°	3386.8	3574.5
137.5°	3200.0	3353.6
140°	3071.8	3215.4
142.5°	2965.6	3089.1
145°	2806.4	2899.9
147.5°	2684.2	2761.6
150°	2607.2	2670.0
152.5°	2541.4	2588.8
155°	2465.8	2497.2
157.5°	2406.0	2428.0
160°	2370.3	2383.0
162.5°	2346.9	2359.0
165°	2313.2	2325.9
167.5°	2289.0	2294.3
170°	2282.3	2282.3
172.5°	2264.5	2259.8
175°	2253.8	2253.8
177.5°	2244.1	2238.8
180°	2238.8	2238.8



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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	0.00	0.00	0.13	0.78	2.41	12.16	12.82	13.33	13.98	15.61
	3H	0.00	0.25	0.83	1.41	3.06	13.99	14.58	15.16	15.75	17.39
	4H	0.00	0.51	1.13	1.67	3.32	14.63	15.19	15.81	16.36	18.00
	6H	0.19	0.71	1.37	1.87	3.53	15.05	15.57	16.24	16.74	18.40
	8H	0.25	0.74	1.44	1.92	3.57	15.17	15.67	16.36	16.84	18.50
	12H	0.26	0.73	1.45	1.90	3.57	15.23	15.70	16.43	16.88	18.55
4H	2H	6.17	6.73	7.36	7.90	9.54	12.41	12.97	13.60	14.14	15.78
	3H	7.71	8.19	8.91	9.37	11.03	14.44	14.91	15.63	16.10	17.76
	4H	7.80	8.24	9.00	9.41	11.09	15.20	15.64	16.40	16.81	18.49
	6H	7.80	8.17	9.00	9.37	11.04	15.73	16.11	16.93	17.31	18.97
	8H	7.77	8.12	8.97	9.31	10.99	15.89	16.24	17.09	17.43	19.12
	12H	7.72	8.03	8.93	9.23	10.92	15.98	16.30	17.19	17.50	19.18
8H	4H	9.23	9.58	10.43	10.77	12.45	15.24	15.59	16.44	16.78	18.47
	6H	9.46	9.75	10.68	10.98	12.66	15.87	16.16	17.09	17.39	19.07
	8H	9.48	9.73	10.70	10.94	12.64	16.09	16.34	17.31	17.55	19.25
	12H	9.44	9.66	10.66	10.86	12.59	16.23	16.45	17.45	17.65	19.38
12H	4H	9.37	9.68	10.58	10.88	12.57	15.19	15.50	16.40	16.70	18.39
	6H	9.72	9.97	10.94	11.18	12.88	15.85	16.10	17.07	17.31	19.01
	8H	9.78	10.00	11.01	11.21	12.94	16.07	16.29	17.30	17.50	19.23