

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: P938478

Luminaire Tested: SQ4-FB-150U-100D-B2750-1D-UNV-STD-W-12-3000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938478
REPORT IS A COMBINATION OF REPORTS P933623 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-150U-100D-B2750-1D-UNV-STD-W-12-3000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

Summary

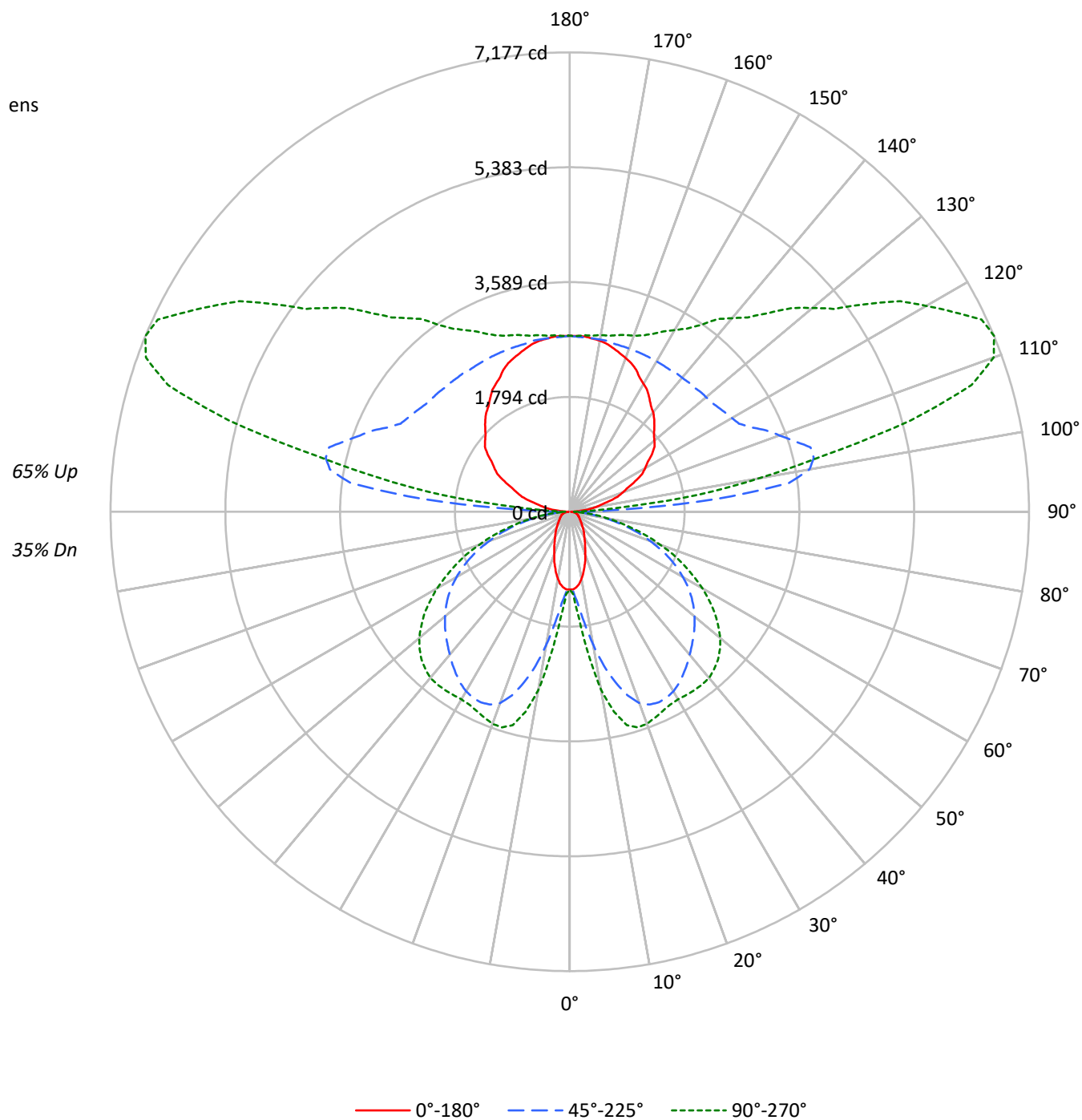
Lumens per Lamp: N/A
Luminaire Lumens: 27233.3 lumens
Efficiency: N/A
Efficacy: 125.4 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 217.2
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: P938478

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Luminous Intensity Polar Plot



TEST NUMBER: P938478

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3759	3759	3759
5°	3674	4346	5053
10°	3334	6337	8377
15°	2834	8281	10116
20°	2308	9599	10309
25°	1927	10047	10100
30°	1625	10113	10081
35°	1438	9948	10341
40°	1254	9732	10611
45°	1136	9575	10652
50°	1043	9435	10476
55°	1000	9228	10012
60°	1024	8827	9279
65°	1068	8214	8271
70°	1141	7169	6987
75°	1268	5850	5453
80°	1395	4063	3674
85°	1264	2159	1881

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 10652 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.2	0.6
10°-20°	696.8	2.6
20°-30°	1218.8	4.5
30°-40°	1569.0	5.8
40°-50°	1752.5	6.4
50°-60°	1678.5	6.2
60°-70°	1330.2	4.9
70°-80°	782.2	2.9
80°-90°	227.8	0.8
90°-100°	1340.0	4.9
100°-110°	3522.9	12.9
110°-120°	3652.8	13.4
120°-130°	2930.0	10.8
130°-140°	2299.0	8.4
140°-150°	1764.6	6.5
150°-160°	1270.8	4.7
160°-170°	777.5	2.9
170°-180°	262.7	1.0
0°-30°	2072.8	7.6
0°-40°	3641.8	13.4
0°-60°	7072.8	26.0
0°-90°	9413.0	34.6
90°-120°	8515.7	31.3
90°-150°	15509.3	56.9
90°-180°	17820.0	65.4
0°-180°	27233.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1215	1215	1215	1215	1215	
5°	1184	1270	1430	1618	1677	109
15°	887	1638	2759	3345	3451	247
25°	567	1856	3287	3431	3435	261
35°	383	1774	3095	3271	3400	239
45°	262	1415	2736	3134	3275	203
55°	188	899	2321	2697	2771	171
65°	148	477	1723	1938	1966	147
75°	109	293	946	1040	1044	115
85°	39	90	234	258	262	41
90°	18	52	140	70	70	18
95°	177	694	2308	1190	810	197
105°	635	961	3895	5913	5516	673
115°	1127	1369	3120	6223	7103	1113
125°	1568	1758	2838	4795	5657	1392
135°	1869	2057	2749	3871	4389	1446
145°	2168	2306	2714	3302	3561	1358
155°	2450	2518	2714	2980	3066	1126
165°	2644	2679	2714	2821	2856	746
175°	2749	2749	2732	2767	2767	261
180°	2749	2749	2749	2749	2749	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4	1215.4
2.5°	1215.4	1215.4	1223.2	1227.2	1235.0	1238.9	1246.7	1254.5	1278.0	1281.9	1289.7
5°	1184.2	1199.8	1250.6	1270.2	1324.9	1399.1	1430.4	1481.2	1586.7	1617.9	1637.5
7.5°	1137.3	1172.5	1297.5	1328.7	1465.5	1660.9	1743.1	1852.4	2020.5	2102.5	2169.0
10°	1063.0	1137.3	1360.0	1434.2	1657.1	1954.1	2106.5	2258.9	2512.9	2626.2	2669.2
12.5°	981.0	1102.1	1426.4	1528.1	1848.6	2282.3	2466.0	2634.1	2923.3	3075.7	3099.1
15°	887.1	1051.3	1489.0	1637.5	2051.8	2555.9	2759.1	2966.3	3236.0	3345.3	3372.7
17.5°	805.1	1012.2	1547.6	1703.9	2208.0	2802.1	3009.3	3181.2	3400.0	3474.3	3493.9
20°	703.4	949.7	1586.7	1789.9	2372.2	2981.9	3181.2	3314.0	3462.5	3509.5	3517.3
22.5°	629.2	883.3	1610.1	1821.1	2481.7	3091.3	3259.3	3364.9	3466.5	3482.2	3486.0
25°	566.7	809.0	1606.2	1856.3	2575.4	3157.8	3286.7	3364.9	3423.5	3431.3	3431.3
27.5°	508.1	726.9	1590.6	1864.1	2645.8	3173.3	3275.0	3329.7	3357.0	3372.7	3372.7
30°	457.2	648.8	1551.5	1848.6	2677.1	3157.8	3239.8	3267.2	3294.5	3318.0	3329.7
32.5°	418.2	574.4	1492.9	1817.3	2680.9	3118.7	3177.3	3193.0	3232.0	3286.7	3306.3
35°	383.0	500.2	1426.4	1774.3	2657.5	3056.1	3095.3	3110.8	3189.0	3271.1	3298.5
37.5°	347.9	445.6	1340.5	1700.1	2622.4	2981.9	3009.3	3036.6	3157.8	3255.5	3286.7
40°	312.7	398.6	1238.9	1617.9	2567.6	2892.0	2915.4	2958.4	3118.7	3232.0	3263.3
42.5°	285.2	359.6	1129.5	1531.9	2497.2	2790.4	2825.6	2888.1	3071.8	3193.0	3228.1
45°	261.9	320.4	1012.2	1414.7	2407.4	2684.9	2735.7	2821.6	3017.1	3134.3	3165.6
47.5°	238.4	293.1	891.0	1293.6	2309.7	2579.4	2645.8	2743.4	2942.8	3056.1	3083.5
50°	218.9	265.7	769.9	1164.7	2204.2	2466.0	2544.2	2645.8	2849.0	2954.5	2989.7
52.5°	203.2	242.3	656.6	1035.7	2083.0	2348.8	2438.7	2544.2	2735.7	2837.3	2860.8
55°	187.6	222.7	558.9	898.8	1958.0	2223.7	2321.4	2423.0	2610.6	2696.6	2712.2
57.5°	179.7	207.2	476.8	769.9	1825.1	2083.0	2192.5	2286.2	2462.1	2528.5	2544.2
60°	168.0	195.4	414.2	660.4	1680.4	1950.1	2044.0	2137.7	2286.2	2341.0	2352.7
62.5°	156.3	187.6	367.4	554.9	1531.9	1793.8	1887.6	1973.6	2098.7	2137.7	2153.3
65°	148.5	179.7	332.2	476.8	1379.6	1629.7	1723.4	1797.8	1899.3	1938.4	1946.3
67.5°	140.7	172.0	304.9	410.4	1227.2	1465.5	1535.9	1606.2	1684.4	1723.4	1727.4
70°	129.0	164.2	281.4	363.4	1070.8	1278.0	1336.6	1410.9	1473.4	1492.9	1504.6
72.5°	121.2	152.4	265.7	328.2	910.6	1098.2	1152.9	1195.9	1250.6	1270.2	1270.2
75°	109.4	136.8	250.1	293.1	746.4	898.8	945.8	988.8	1031.8	1039.5	1027.8
77.5°	97.7	121.2	214.9	246.2	582.3	711.3	750.3	773.8	809.0	816.8	820.7
80°	82.0	105.5	168.0	191.5	422.1	523.7	551.1	570.6	601.9	601.9	609.6
82.5°	62.5	82.0	121.2	136.8	285.2	359.6	383.0	394.7	414.2	414.2	414.2
85°	39.0	50.8	78.2	89.9	172.0	218.9	234.5	238.4	254.0	257.9	257.9
87.5°	19.5	27.3	50.8	54.7	89.9	113.3	113.3	121.2	121.2	117.2	113.3
90°	18.4	33.2	48.0	51.7	81.1	120.5	140.2	124.6	93.5	70.1	70.1
92.5°	73.8	199.2	324.7	356.0	500.6	693.3	789.6	692.0	496.8	350.5	336.6
95°	177.1	406.6	636.3	693.7	1231.8	1949.3	2308.0	2059.6	1562.7	1190.0	1147.8
97.5°	306.3	508.8	711.3	762.0	1659.2	2855.6	3453.7	3296.7	2982.6	2747.1	2666.7
100°	405.8	589.5	773.2	819.2	1814.8	3142.3	3806.1	3817.5	3840.5	3857.7	3762.0
102.5°	490.7	662.1	833.5	876.4	1886.1	3232.5	3905.7	4105.8	4505.9	4806.1	4724.0
105°	634.7	779.8	925.0	961.3	1939.1	3242.8	3894.6	4343.1	5240.2	5912.9	5868.9
107.5°	782.3	917.6	1052.9	1086.7	1948.8	3098.4	3673.2	4298.9	5550.1	6488.6	6499.2
110°	881.9	1004.0	1126.2	1156.8	1934.1	2970.5	3488.8	4188.2	5587.1	6636.2	6682.1

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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	979.7	1096.1	1212.6	1241.7	1934.7	2858.8	3320.8	4036.7	5468.4	6542.1	6612.6
115°	1127.3	1234.7	1342.1	1369.0	1952.6	2730.7	3119.8	3809.4	5188.5	6222.9	6320.8
117.5°	1273.0	1370.5	1468.2	1492.5	1988.8	2650.5	2981.4	3603.7	4848.5	5782.0	5890.5
120°	1357.8	1449.7	1541.5	1564.5	2018.3	2623.5	2926.1	3494.7	4631.9	5484.9	5590.3
122.5°	1440.8	1533.5	1626.2	1649.4	2060.8	2609.4	2883.7	3395.7	4419.8	5187.9	5291.9
125°	1568.2	1652.6	1737.1	1758.2	2118.0	2597.7	2837.5	3272.5	4142.5	4794.9	4890.7
127.5°	1671.5	1756.8	1842.0	1863.3	2175.1	2590.9	2798.8	3172.3	3919.3	4479.5	4560.2
130°	1726.9	1818.7	1910.5	1933.4	2216.9	2595.0	2784.0	3116.5	3781.5	4280.2	4354.9
132.5°	1784.1	1875.9	1967.7	1990.6	2250.7	2597.6	2771.1	3068.7	3664.1	4110.5	4177.4
135°	1868.9	1952.5	2036.2	2057.1	2287.7	2595.3	2749.0	2998.2	3496.8	3870.6	3928.2
137.5°	1955.6	2038.5	2121.3	2142.0	2343.0	2611.1	2745.2	2955.9	3377.4	3693.6	3740.7
140°	2027.6	2103.8	2180.1	2199.2	2376.9	2613.8	2732.3	2914.3	3278.4	3551.5	3595.5
142.5°	2082.9	2153.4	2223.9	2241.6	2405.1	2623.3	2732.3	2892.2	3212.0	3451.9	3489.8
145°	2167.8	2229.3	2290.8	2306.2	2442.0	2623.3	2713.9	2844.6	3106.2	3302.4	3331.1
147.5°	2252.6	2312.5	2372.3	2387.3	2496.2	2641.3	2713.9	2816.8	3022.6	3177.0	3200.8
150°	2308.0	2362.2	2416.3	2429.8	2524.5	2650.8	2713.9	2800.8	2974.7	3105.0	3124.2
152.5°	2365.2	2406.2	2447.2	2457.4	2542.9	2656.9	2713.9	2788.1	2936.5	3047.8	3062.4
155°	2450.1	2480.5	2510.8	2518.3	2583.5	2670.4	2713.9	2772.9	2891.1	2979.6	2989.3
157.5°	2512.8	2542.3	2571.8	2579.2	2624.0	2683.9	2713.9	2759.8	2851.6	2920.5	2927.3
160°	2555.2	2578.2	2601.2	2606.9	2642.6	2690.1	2713.9	2753.2	2831.9	2891.0	2894.9
162.5°	2597.6	2614.9	2632.0	2636.4	2662.2	2696.6	2713.9	2747.1	2813.6	2863.3	2867.0
165°	2643.8	2659.3	2674.9	2678.9	2690.5	2706.1	2713.9	2737.6	2785.2	2820.8	2824.8
167.5°	2686.3	2693.7	2700.9	2702.8	2712.7	2725.8	2732.3	2747.9	2779.0	2802.4	2804.1
170°	2713.9	2721.3	2728.7	2730.5	2731.1	2731.9	2732.3	2747.9	2779.0	2802.4	2802.4
172.5°	2728.7	2730.2	2731.9	2732.3	2732.3	2732.3	2732.3	2744.6	2769.3	2787.7	2786.2
175°	2749.0	2749.0	2749.0	2749.0	2743.4	2736.1	2732.3	2740.1	2755.7	2767.4	2767.4
177.5°	2749.0	2749.0	2749.0	2749.0	2744.6	2738.9	2736.1	2742.2	2754.5	2763.7	2762.0
180°	2749.0	2749.0	2749.0	2749.0	2749.0	2749.0	2749.0	2749.0	2749.0	2749.0	2749.0

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	1215.4	1215.4
2.5°	1297.5	1289.7
5°	1668.8	1676.6
7.5°	2247.2	2243.2
10°	2794.3	2829.4
12.5°	3193.0	3200.8
15°	3435.2	3450.9
17.5°	3529.0	3532.9
20°	3532.9	3525.1
22.5°	3489.9	3482.2
25°	3439.2	3435.2
27.5°	3392.2	3396.2
30°	3372.7	3384.4
32.5°	3372.7	3392.2
35°	3380.5	3400.0
37.5°	3376.6	3400.0
40°	3361.0	3388.3
42.5°	3318.0	3337.5
45°	3251.5	3275.0
47.5°	3165.6	3181.2
50°	3056.1	3071.8
52.5°	2919.3	2923.3
55°	2755.2	2770.9
57.5°	2579.4	2583.2
60°	2384.0	2395.7
62.5°	2176.8	2176.8
65°	1958.0	1965.8
67.5°	1731.3	1750.8
70°	1500.7	1504.6
72.5°	1274.0	1274.0
75°	1039.5	1043.5
77.5°	816.8	816.8
80°	605.8	609.6
82.5°	418.2	426.0
85°	261.9	261.9
87.5°	121.2	109.4
90°	70.1	70.1
92.5°	280.8	225.1
95°	978.8	809.9
97.5°	2345.3	2023.9
100°	3379.1	2996.2
102.5°	4396.1	4068.0
105°	5692.7	5516.4
107.5°	6541.9	6584.5
110°	6865.8	7049.5

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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	6894.7	7176.8
115°	6711.8	7102.9
117.5°	6324.2	6757.9
120°	6011.7	6433.3
122.5°	5707.7	6123.4
125°	5273.6	5656.6
127.5°	4883.4	5206.4
130°	4653.3	4951.8
132.5°	4444.6	4711.9
135°	4158.7	4389.1
137.5°	3929.3	4117.8
140°	3771.8	3948.1
142.5°	3641.5	3793.1
145°	3446.0	3560.7
147.5°	3295.9	3391.0
150°	3201.3	3278.4
152.5°	3120.6	3178.8
155°	3027.7	3066.3
157.5°	2954.4	2981.4
160°	2910.5	2926.1
162.5°	2881.8	2896.6
165°	2840.4	2855.9
167.5°	2810.6	2817.2
170°	2802.4	2802.4
172.5°	2780.5	2774.8
175°	2767.4	2767.4
177.5°	2755.5	2749.0
180°	2749.0	2749.0

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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	4.00	4.77	5.08	5.84	7.32	17.20	17.96	18.27	19.04	20.51
	3H	4.70	5.38	5.78	6.47	7.96	19.03	19.72	20.11	20.80	22.29
	4H	4.99	5.64	6.09	6.73	8.23	19.68	20.33	20.77	21.41	22.91
	6H	5.24	5.84	6.34	6.93	8.44	20.11	20.70	21.21	21.80	23.30
	8H	5.30	5.87	6.41	6.98	8.48	20.23	20.80	21.33	21.90	23.41
	12H	5.32	5.86	6.43	6.96	8.49	20.29	20.83	21.40	21.94	23.46
4H	2H	11.21	11.86	12.31	12.95	14.45	17.46	18.11	18.56	19.19	20.69
	3H	12.77	13.31	13.88	14.43	15.94	19.50	20.04	20.60	21.16	22.67
	4H	12.86	13.36	13.97	14.47	16.00	20.26	20.76	21.38	21.87	23.40
	6H	12.87	13.30	13.99	14.42	15.95	20.80	21.23	21.92	22.36	23.88
	8H	12.84	13.24	13.96	14.36	15.90	20.96	21.36	22.08	22.48	24.02
	12H	12.79	13.16	13.93	14.29	15.83	21.05	21.42	22.19	22.55	24.09
8H	4H	14.30	14.70	15.42	15.82	17.36	20.32	20.72	21.43	21.84	23.38
	6H	14.54	14.87	15.68	16.03	17.57	20.94	21.28	22.09	22.44	23.97
	8H	14.56	14.85	15.70	15.99	17.54	21.17	21.46	22.31	22.60	24.15
	12H	14.52	14.77	15.67	15.91	17.50	21.31	21.56	22.46	22.70	24.29
12H	4H	14.44	14.80	15.58	15.94	17.48	20.26	20.63	21.40	21.76	23.30
	6H	14.80	15.09	15.94	16.23	17.79	20.93	21.22	22.07	22.36	23.91
	8H	14.86	15.12	16.01	16.26	17.85	21.15	21.41	22.31	22.55	24.14