

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: P938505

Luminaire Tested: SQ4-FB-150U-100D-B50-1D-UNV-STD-W-12

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938505
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-B50-1D-UNV-STD-W-12
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

Summary

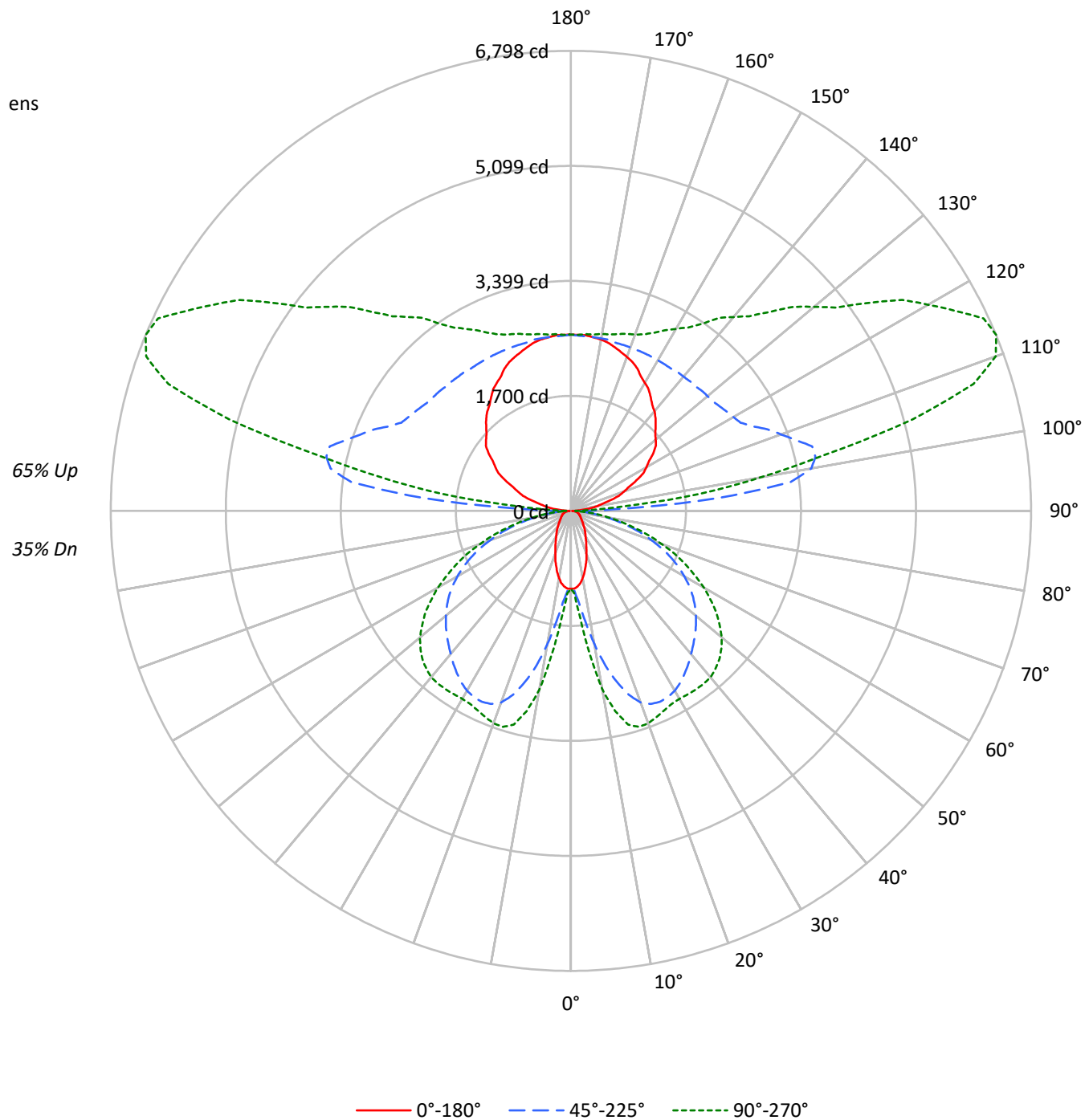
Lumens per Lamp: N/A
Luminaire Lumens: 25797.1 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3561	3561	3561
5°	3480	4117	4787
10°	3158	6003	7935
15°	2685	7844	9582
20°	2187	9093	9766
25°	1825	9517	9567
30°	1539	9580	9549
35°	1362	9423	9796
40°	1188	9219	10051
45°	1076	9070	10091
50°	988	8937	9924
55°	947	8741	9484
60°	971	8361	8789
65°	1012	7781	7835
70°	1080	6791	6619
75°	1202	5542	5166
80°	1322	3848	3480
85°	1199	2045	1782

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 10091 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.9	0.6
10°-20°	660.1	2.6
20°-30°	1154.5	4.5
30°-40°	1486.2	5.8
40°-50°	1660.1	6.4
50°-60°	1590.0	6.2
60°-70°	1260.1	4.9
70°-80°	740.9	2.9
80°-90°	215.8	0.8
90°-100°	1269.3	4.9
100°-110°	3337.1	12.9
110°-120°	3460.2	13.4
120°-130°	2775.5	10.8
130°-140°	2177.8	8.4
140°-150°	1671.5	6.5
150°-160°	1203.8	4.7
160°-170°	736.5	2.9
170°-180°	248.8	1.0
0°-30°	1963.5	7.6
0°-40°	3449.8	13.4
0°-60°	6699.8	26.0
0°-90°	8916.6	34.6
90°-120°	8066.6	31.3
90°-150°	14691.3	56.9
90°-180°	16880.0	65.4
0°-180°	25797.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1122	1203	1355	1533	1588	104
15°	840	1551	2614	3169	3269	234
25°	537	1758	3113	3250	3254	247
35°	363	1681	2932	3098	3221	227
45°	248	1340	2591	2969	3102	192
55°	178	851	2199	2554	2625	162
65°	141	452	1632	1836	1862	139
75°	104	278	896	985	988	109
85°	37	85	222	244	248	39
90°	18	49	133	66	66	17
95°	168	657	2186	1127	767	186
105°	601	911	3689	5601	5225	637
115°	1068	1297	2955	5895	6728	1055
125°	1486	1666	2688	4542	5358	1319
135°	1770	1949	2604	3666	4158	1370
145°	2054	2184	2571	3128	3373	1286
155°	2321	2386	2571	2822	2905	1066
165°	2504	2538	2571	2672	2705	707
175°	2604	2604	2588	2622	2622	247
180°	2604	2604	2604	2604	2604	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1151.3	1151.3	1158.7	1162.5	1169.8	1173.6	1180.9	1188.3	1210.6	1214.3	1221.7
5°	1121.7	1136.5	1184.7	1203.2	1255.0	1325.3	1355.0	1403.1	1503.0	1532.6	1551.1
7.5°	1077.3	1110.6	1229.1	1258.7	1388.2	1573.3	1651.1	1754.7	1914.0	1991.7	2054.6
10°	1006.9	1077.3	1288.3	1358.6	1569.7	1851.0	1995.4	2139.8	2380.4	2487.7	2528.4
12.5°	929.2	1043.9	1351.2	1447.5	1751.1	2161.9	2335.9	2495.2	2769.1	2913.5	2935.7
15°	840.3	995.8	1410.4	1551.1	1943.6	2421.1	2613.6	2809.8	3065.3	3168.9	3194.8
17.5°	762.6	958.8	1466.0	1614.0	2091.6	2654.3	2850.6	3013.5	3220.7	3291.0	3309.6
20°	666.3	899.6	1503.0	1695.5	2247.1	2824.6	3013.5	3139.3	3279.9	3324.4	3331.8
22.5°	596.0	836.7	1525.2	1725.1	2350.8	2928.3	3087.4	3187.5	3283.7	3298.5	3302.2
25°	536.8	766.3	1521.5	1758.4	2439.6	2991.2	3113.4	3187.5	3242.9	3250.3	3250.3
27.5°	481.3	688.5	1506.7	1765.8	2506.3	3006.0	3102.3	3154.1	3180.0	3194.8	3194.8
30°	433.1	614.6	1469.6	1751.1	2535.9	2991.2	3068.9	3094.9	3120.8	3143.0	3154.1
32.5°	396.1	544.1	1414.2	1721.5	2539.5	2954.2	3009.7	3024.6	3061.6	3113.4	3131.9
35°	362.8	473.8	1351.2	1680.7	2517.3	2894.9	2932.0	2946.8	3020.8	3098.5	3124.5
37.5°	329.5	422.1	1269.8	1610.4	2484.1	2824.6	2850.6	2876.4	2991.2	3083.8	3113.4
40°	296.2	377.6	1173.6	1532.6	2432.2	2739.5	2761.7	2802.4	2954.2	3061.6	3091.2
42.5°	270.2	340.6	1069.9	1451.2	2365.5	2643.2	2676.6	2735.8	2909.8	3024.6	3057.8
45°	248.1	303.6	958.8	1340.1	2280.5	2543.3	2591.4	2672.8	2857.9	2969.0	2998.6
47.5°	225.8	277.7	844.1	1225.4	2187.9	2443.3	2506.3	2598.8	2787.6	2894.9	2920.9
50°	207.3	251.7	729.3	1103.2	2088.0	2335.9	2410.0	2506.3	2698.8	2798.7	2832.1
52.5°	192.5	229.5	622.0	981.1	1973.2	2224.9	2310.1	2410.0	2591.4	2687.7	2709.9
55°	177.7	211.0	529.4	851.4	1854.7	2106.5	2199.0	2295.2	2473.0	2554.4	2569.2
57.5°	170.3	196.2	451.7	729.3	1728.8	1973.2	2076.8	2165.7	2332.3	2395.1	2410.0
60°	159.2	185.1	392.4	625.6	1591.8	1847.3	1936.2	2025.0	2165.7	2217.5	2228.6
62.5°	148.0	177.7	348.0	525.7	1451.2	1699.2	1788.0	1869.5	1988.0	2025.0	2039.8
65°	140.7	170.3	314.7	451.7	1306.9	1543.7	1632.5	1703.0	1799.2	1836.2	1843.6
67.5°	133.3	162.9	288.8	388.7	1162.5	1388.2	1454.9	1521.5	1595.6	1632.5	1636.3
70°	122.2	155.5	266.6	344.3	1014.3	1210.6	1266.1	1336.5	1395.7	1414.2	1425.3
72.5°	114.8	144.4	251.7	310.9	862.5	1040.3	1092.1	1132.8	1184.7	1203.2	1203.2
75°	103.7	129.5	237.0	277.7	707.0	851.4	895.9	936.6	977.3	984.7	973.6
77.5°	92.6	114.8	203.6	233.2	551.6	673.8	710.8	733.0	766.3	773.7	777.5
80°	77.7	99.9	159.2	181.4	399.8	496.0	522.0	540.5	570.1	570.1	577.5
82.5°	59.2	77.7	114.8	129.5	270.2	340.6	362.8	373.9	392.4	392.4	392.4
85°	37.0	48.1	74.1	85.2	162.9	207.3	222.1	225.8	240.6	244.3	244.3
87.5°	18.5	25.9	48.1	51.8	85.2	107.3	107.3	114.8	114.8	111.1	107.3
90°	17.5	31.5	45.5	48.9	76.9	114.1	132.8	118.1	88.5	66.4	66.4
92.5°	69.9	188.7	307.6	337.3	474.2	656.7	747.9	655.5	470.6	332.0	318.9
95°	167.7	385.2	602.7	657.1	1166.8	1846.5	2186.3	1950.9	1480.3	1127.2	1087.3
97.5°	290.1	481.9	673.8	721.8	1571.7	2705.0	3271.5	3122.8	2825.4	2602.2	2526.1
100°	384.4	558.4	732.4	776.0	1719.1	2976.6	3605.3	3616.2	3637.9	3654.3	3563.6
102.5°	464.9	627.2	789.5	830.1	1786.6	3062.0	3699.8	3889.3	4268.3	4552.6	4474.9
105°	601.2	738.7	876.2	910.6	1836.8	3071.7	3689.2	4114.1	4963.8	5601.1	5559.4
107.5°	741.0	869.2	997.3	1029.4	1846.1	2935.0	3479.5	4072.1	5257.4	6146.4	6156.5
110°	835.4	951.1	1066.8	1095.8	1832.1	2813.9	3304.8	3967.4	5292.4	6286.2	6329.7

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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	928.0	1038.3	1148.6	1176.2	1832.7	2708.0	3145.7	3823.8	5180.0	6197.1	6263.9
115°	1067.8	1169.6	1271.4	1296.8	1849.6	2586.7	2955.3	3608.5	4914.9	5894.8	5987.4
117.5°	1205.9	1298.3	1390.7	1413.8	1883.9	2510.7	2824.1	3413.7	4592.8	5477.1	5579.8
120°	1286.2	1373.3	1460.2	1482.0	1911.9	2485.1	2771.7	3310.4	4387.7	5195.7	5295.5
122.5°	1364.9	1452.7	1540.4	1562.4	1952.2	2471.7	2731.6	3216.6	4186.7	4914.3	5012.8
125°	1485.5	1565.5	1645.5	1665.5	2006.3	2460.7	2687.9	3099.9	3924.0	4542.0	4632.7
127.5°	1583.3	1664.1	1744.9	1765.1	2060.4	2454.3	2651.2	3005.0	3712.6	4243.3	4319.8
130°	1635.8	1722.8	1809.7	1831.5	2100.0	2458.1	2637.1	2952.1	3582.1	4054.5	4125.2
132.5°	1690.0	1776.9	1863.9	1885.7	2132.0	2460.6	2624.9	2906.9	3470.8	3893.8	3957.1
135°	1770.3	1849.5	1928.8	1948.6	2167.1	2458.4	2604.0	2840.1	3312.3	3666.5	3721.1
137.5°	1852.5	1931.0	2009.4	2029.0	2219.5	2473.4	2600.4	2800.0	3199.3	3498.8	3543.4
140°	1920.7	1992.9	2065.2	2083.2	2251.5	2475.9	2588.2	2760.6	3105.6	3364.2	3405.9
142.5°	1973.1	2039.9	2106.6	2123.4	2278.3	2484.9	2588.2	2739.7	3042.6	3269.8	3305.8
145°	2053.5	2111.8	2170.0	2184.5	2313.2	2484.9	2570.7	2694.6	2942.4	3128.2	3155.4
147.5°	2133.8	2190.5	2247.2	2261.4	2364.5	2502.0	2570.7	2668.3	2863.2	3009.4	3032.0
150°	2186.3	2237.6	2288.9	2301.7	2391.3	2511.0	2570.7	2653.1	2817.8	2941.3	2959.5
152.5°	2240.5	2279.3	2318.1	2327.8	2408.8	2516.8	2570.7	2641.1	2781.6	2887.1	2900.9
155°	2320.9	2349.7	2378.3	2385.5	2447.3	2529.6	2570.7	2626.7	2738.6	2822.5	2831.6
157.5°	2380.3	2408.2	2436.2	2443.2	2485.7	2542.3	2570.7	2614.3	2701.2	2766.5	2773.0
160°	2420.5	2442.2	2464.0	2469.4	2503.2	2548.2	2570.7	2608.0	2682.5	2738.5	2742.2
162.5°	2460.6	2477.0	2493.2	2497.3	2521.8	2554.4	2570.7	2602.2	2665.2	2712.3	2715.8
165°	2504.3	2519.1	2533.8	2537.6	2548.6	2563.4	2570.7	2593.3	2638.3	2672.1	2675.8
167.5°	2544.6	2551.6	2558.5	2560.3	2569.6	2582.0	2588.2	2603.0	2632.5	2654.6	2656.2
170°	2570.7	2577.7	2584.8	2586.5	2587.1	2587.8	2588.2	2603.0	2632.5	2654.6	2654.6
172.5°	2584.8	2586.2	2587.8	2588.2	2588.2	2588.2	2588.2	2599.9	2623.2	2640.7	2639.3
175°	2604.0	2604.0	2604.0	2604.0	2598.8	2591.8	2588.2	2595.6	2610.3	2621.5	2621.5
177.5°	2604.0	2604.0	2604.0	2604.0	2599.9	2594.5	2591.8	2597.5	2609.2	2617.9	2616.3
180°	2604.0	2604.0	2604.0	2604.0	2604.0	2604.0	2604.0	2604.0	2604.0	2604.0	2604.0

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	1151.3	1151.3
2.5°	1229.1	1221.7
5°	1580.8	1588.2
7.5°	2128.7	2124.9
10°	2647.0	2680.2
12.5°	3024.6	3032.0
15°	3254.1	3268.9
17.5°	3342.9	3346.6
20°	3346.6	3339.2
22.5°	3305.9	3298.5
25°	3257.8	3254.1
27.5°	3213.3	3217.1
30°	3194.8	3206.0
32.5°	3194.8	3213.3
35°	3202.2	3220.7
37.5°	3198.5	3220.7
40°	3183.7	3209.6
42.5°	3143.0	3161.5
45°	3080.1	3102.3
47.5°	2998.6	3013.5
50°	2894.9	2909.8
52.5°	2765.4	2769.1
55°	2609.9	2624.7
57.5°	2443.3	2447.0
60°	2258.2	2269.3
62.5°	2062.0	2062.0
65°	1854.7	1862.1
67.5°	1640.0	1658.5
70°	1421.5	1425.3
72.5°	1206.8	1206.8
75°	984.7	988.5
77.5°	773.7	773.7
80°	573.8	577.5
82.5°	396.1	403.5
85°	248.1	248.1
87.5°	114.8	103.7
90°	66.4	66.4
92.5°	266.0	213.2
95°	927.2	767.2
97.5°	2221.6	1917.1
100°	3200.9	2838.1
102.5°	4164.2	3853.5
105°	5392.4	5225.4
107.5°	6196.9	6237.3
110°	6503.7	6677.7



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	6531.1	6798.3
115°	6357.8	6728.3
117.5°	5990.7	6401.5
120°	5694.7	6094.0
122.5°	5406.6	5800.4
125°	4995.5	5358.3
127.5°	4625.8	4931.8
130°	4407.9	4690.6
132.5°	4210.2	4463.4
135°	3939.3	4157.6
137.5°	3722.1	3900.7
140°	3572.9	3739.9
142.5°	3449.4	3593.1
145°	3264.2	3373.0
147.5°	3122.1	3212.1
150°	3032.5	3105.6
152.5°	2956.0	3011.1
155°	2868.0	2904.6
157.5°	2798.5	2824.1
160°	2757.0	2771.7
162.5°	2729.8	2743.8
165°	2690.6	2705.3
167.5°	2662.4	2668.6
170°	2654.6	2654.6
172.5°	2633.9	2628.5
175°	2621.5	2621.5
177.5°	2610.2	2604.0
180°	2604.0	2604.0

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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	3.82	4.58	4.89	5.66	7.13	17.01	17.77	18.08	18.85	20.32
	3H	4.51	5.20	5.59	6.28	7.77	18.84	19.53	19.93	20.61	22.11
	4H	4.81	5.46	5.90	6.54	8.04	19.49	20.14	20.58	21.23	22.72
	6H	5.05	5.65	6.15	6.74	8.25	19.92	20.52	21.02	21.61	23.12
	8H	5.12	5.69	6.22	6.79	8.30	20.04	20.61	21.14	21.71	23.22
	12H	5.13	5.67	6.24	6.77	8.30	20.10	20.65	21.22	21.75	23.27
4H	2H	11.03	11.68	12.13	12.76	14.26	17.27	17.92	18.37	19.01	20.50
	3H	12.58	13.13	13.69	14.24	15.75	19.31	19.85	20.42	20.97	22.48
	4H	12.67	13.17	13.79	14.28	15.81	20.08	20.57	21.19	21.68	23.21
	6H	12.68	13.11	13.80	14.23	15.76	20.61	21.04	21.73	22.17	23.69
	8H	12.65	13.05	13.77	14.17	15.71	20.78	21.18	21.89	22.30	23.84
	12H	12.60	12.97	13.74	14.10	15.64	20.87	21.23	22.00	22.36	23.91
8H	4H	14.11	14.51	15.23	15.63	17.17	20.13	20.53	21.25	21.65	23.19
	6H	14.35	14.68	15.49	15.84	17.38	20.76	21.09	21.90	22.25	23.79
	8H	14.37	14.66	15.51	15.80	17.36	20.98	21.27	22.12	22.41	23.97
	12H	14.33	14.59	15.48	15.72	17.32	21.12	21.38	22.27	22.51	24.11
12H	4H	14.25	14.62	15.39	15.75	17.29	20.07	20.44	21.21	21.57	23.11
	6H	14.61	14.90	15.76	16.04	17.60	20.74	21.03	21.88	22.17	23.73
	8H	14.67	14.93	15.83	16.07	17.66	20.97	21.22	22.12	22.36	23.95