

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: P845471

Luminaire Tested: SQ2R-F-050D-840-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845471
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-1)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-F-050D-840-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH FROSTED LENS
500 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

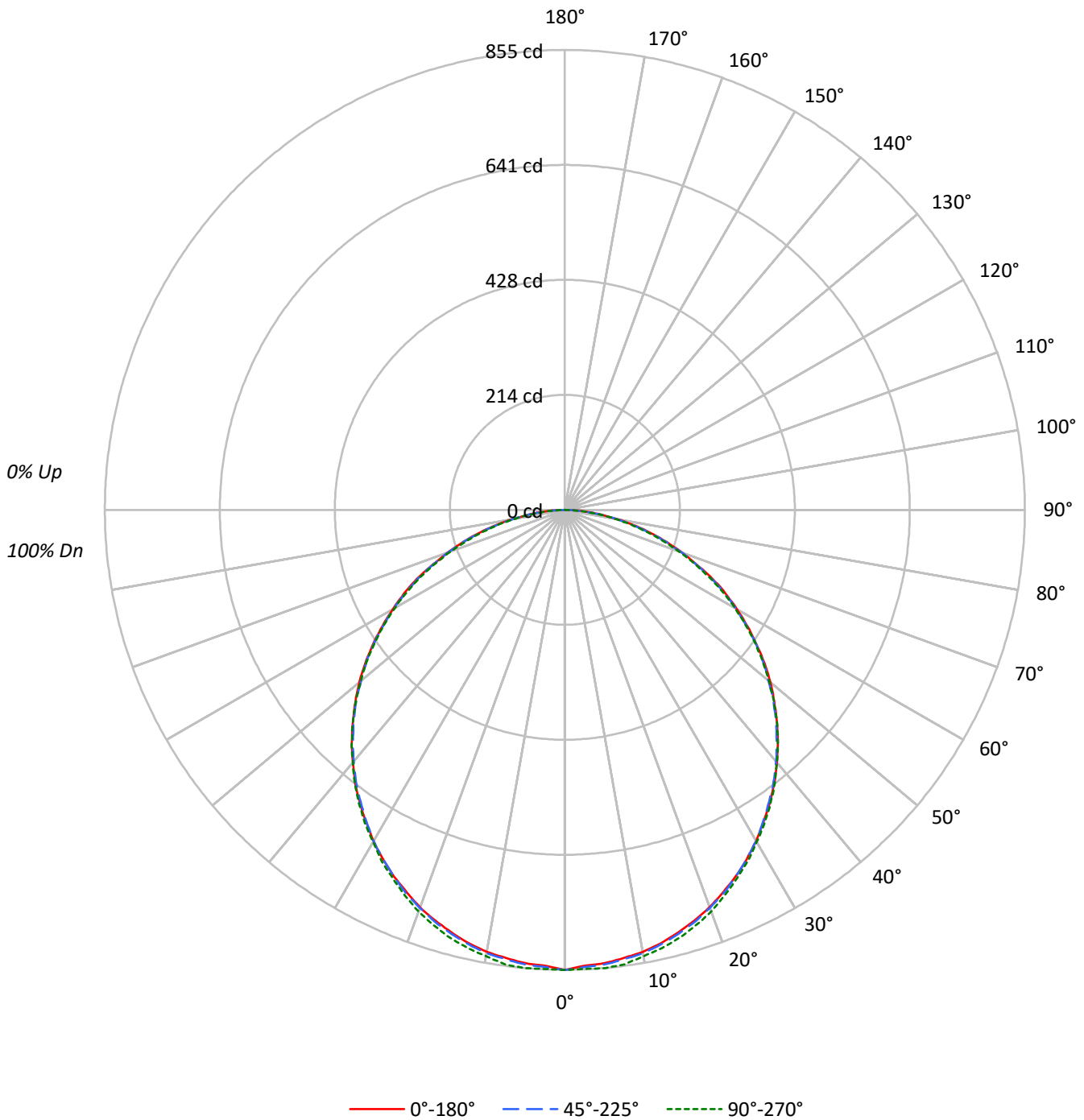
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2401.3 lumens
Efficiency: N/A
Efficacy: 134.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9973
Total Harmonic Distortion (THDi): 0.0531
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 3 HR
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100	
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84			84	
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70			70	
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59			59	
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	57	52	50			50	
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43			43	
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38			38	
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33			33	
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30			30	
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27			27	
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24			24	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13811	13811	13811
5°	13713	13750	13864
10°	13680	13719	13814
15°	13596	13636	13772
20°	13515	13536	13656
25°	13392	13392	13473
30°	13254	13254	13297
35°	13094	13046	13139
40°	12920	12872	12920
45°	12721	12666	12721
50°	12529	12411	12441
55°	12237	12203	12138
60°	11929	11854	11780
65°	11576	11442	11308
70°	10891	10839	10617
75°	10249	10031	9744
80°	9103	8889	8563
85°	7336	6688	6262

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12801 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.9	3.4
10°-20°	231.2	9.6
20°-30°	347.8	14.5
30°-40°	416.1	17.3
40°-50°	429.4	17.9
50°-60°	387.3	16.1
60°-70°	295.5	12.3
70°-80°	169.8	7.1
80°-90°	43.3	1.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	659.9	27.5
0°-40°	1076.0	44.8
0°-60°	1892.7	78.8
0°-90°	2401.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2401.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	855	855	855	855	855	
5°	846	858	848	850	855	80
15°	813	824	816	818	824	230
25°	752	760	752	753	756	346
35°	664	669	662	664	667	416
45°	557	561	555	556	557	430
55°	435	437	434	431	431	389
65°	303	302	300	297	296	298
75°	164	163	161	157	156	173
85°	40	37	36	33	34	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	855.4	855.4	855.4	855.4	855.4
2.5°	848.4	861.2	850.7	853.1	854.2
5°	846.1	857.7	848.4	849.6	855.4
7.5°	840.3	853.1	842.6	844.9	851.9
10°	834.4	846.1	836.8	837.9	842.6
12.5°	825.1	836.8	827.4	829.8	834.4
15°	813.4	823.9	815.8	818.1	823.9
17.5°	800.6	812.3	803.0	806.5	810.0
20°	786.6	796.0	787.8	789.0	794.8
22.5°	769.2	778.5	771.5	771.5	776.2
25°	751.7	759.8	751.7	752.8	756.3
27.5°	731.9	738.9	731.9	733.0	736.5
30°	710.9	717.9	710.9	712.1	713.2
32.5°	687.6	693.4	686.4	687.6	691.1
35°	664.3	668.9	661.9	664.3	666.6
37.5°	639.8	643.3	637.5	638.6	641.0
40°	613.0	616.5	610.7	611.8	613.0
42.5°	586.2	588.5	582.7	583.9	586.2
45°	557.1	560.6	554.7	555.9	557.1
47.5°	527.9	530.3	525.6	524.4	526.8
50°	498.8	500.0	494.1	494.1	495.3
52.5°	467.3	468.5	465.0	462.7	463.8
55°	434.7	437.0	433.5	431.2	431.2
57.5°	402.1	404.4	399.7	398.6	398.6
60°	369.4	370.6	367.1	365.9	364.8
62.5°	336.8	336.8	333.3	332.1	331.0
65°	303.0	301.8	299.5	297.2	296.0
67.5°	264.5	265.7	263.4	259.9	259.9
70°	230.7	231.9	229.6	224.9	224.9
72.5°	198.1	197.0	195.8	192.3	190.0
75°	164.3	163.2	160.8	157.3	156.2
77.5°	130.5	129.4	128.2	123.5	124.7
80°	97.9	96.7	95.6	92.1	92.1
82.5°	68.8	66.4	65.3	61.8	61.8
85°	39.6	37.3	36.1	32.6	33.8
87.5°	14.0	12.8	11.7	9.3	9.3
90°	0.0	0.0	0.0	0.0	0.0



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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	20.89	22.53	21.25	22.84	23.16	20.81	22.45	21.17	22.76	23.08
	3H	22.72	24.20	23.10	24.53	24.89	22.60	24.09	22.98	24.41	24.77
	4H	23.41	24.81	23.81	25.16	25.53	23.26	24.66	23.66	25.01	25.38
	6H	23.92	25.22	24.33	25.58	25.97	23.73	25.03	24.15	25.40	25.79
	8H	24.08	25.32	24.50	25.71	26.11	23.88	25.12	24.30	25.50	25.90
	12H	24.18	25.37	24.61	25.75	26.18	23.96	25.14	24.38	25.52	25.95
4H	2H	21.52	22.92	21.92	23.27	23.65	21.46	22.86	21.86	23.21	23.58
	3H	23.58	24.75	23.99	25.15	25.55	23.47	24.64	23.88	25.04	25.44
	4H	24.40	25.46	24.83	25.87	26.31	24.26	25.32	24.69	25.73	26.17
	6H	25.03	25.96	25.48	26.40	26.86	24.85	25.78	25.31	26.22	26.68
	8H	25.24	26.11	25.70	26.55	27.01	25.04	25.91	25.50	26.35	26.81
	12H	25.38	26.16	25.86	26.63	27.10	25.15	25.93	25.63	26.41	26.87
8H	4H	24.71	25.58	25.17	26.02	26.48	24.58	25.45	25.04	25.89	26.36
	6H	25.46	26.18	25.95	26.67	27.14	25.29	26.02	25.79	26.50	26.98
	8H	25.73	26.38	26.24	26.89	27.37	25.54	26.19	26.05	26.70	27.18
	12H	25.94	26.51	26.44	27.00	27.56	25.71	26.28	26.22	26.77	27.33
12H	4H	24.74	25.52	25.22	25.99	26.46	24.62	25.40	25.10	25.87	26.34
	6H	25.51	26.16	26.02	26.66	27.15	25.35	26.00	25.86	26.51	26.99
	8H	25.84	26.41	26.35	26.90	27.46	25.65	26.23	26.16	26.72	27.28