

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: P845567

Luminaire Tested: SQ2R-PH1-050D-840-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845567
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-PH1-050D-840-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE HEX CONTINUOUS LENS
500 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

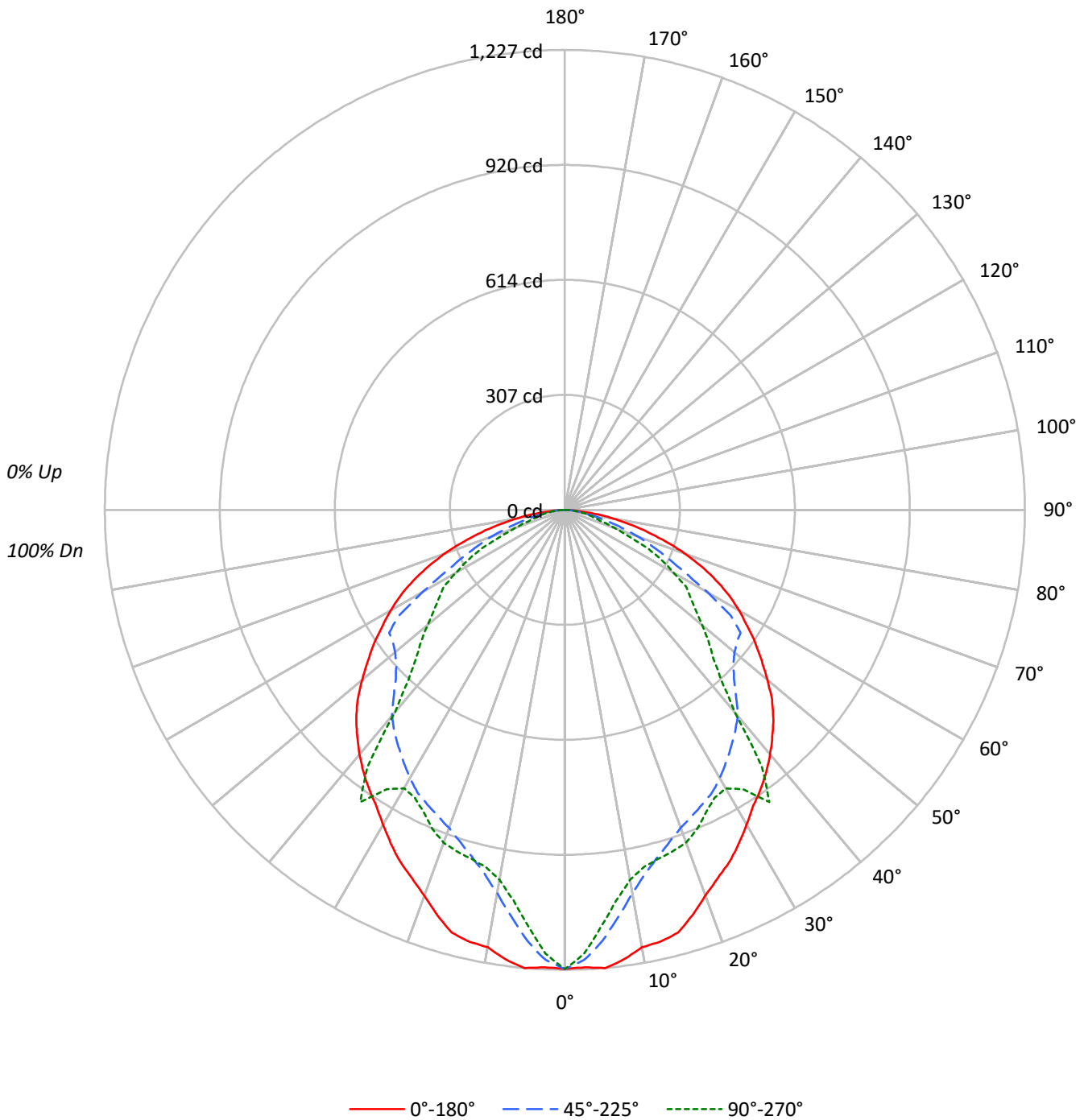
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2706.0 lumens
Efficiency: N/A
Efficacy: 152.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.03 / 1.23
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	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85				85
2	100	92	86	80	97	90	84	79	87	82	77	84	79	76	81	77	74	72				72
3	91	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61				61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	55	64	59	55	53				53
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46				46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40				40
7	66	53	45	39	65	52	44	38	51	44	38	49	43	38	48	42	38	36				36
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32				32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29				29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26				26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19775	19775	19775
5°	19890	18699	18076
10°	19431	17024	16431
15°	19519	16013	16110
20°	18823	15519	16239
25°	18478	15447	15862
30°	18077	15405	15991
35°	17940	15230	18745
40°	17955	15131	14861
45°	17961	14556	12801
50°	17711	14843	12002
55°	17486	16107	11516
60°	17312	14111	10802
65°	17009	11442	9394
70°	16065	9739	6713
75°	14323	7342	5090
80°	11706	4770	4770
85°	7336	4316	3242

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17961 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	4.0
10°-20°	283.3	10.5
20°-30°	415.4	15.4
30°-40°	503.6	18.6
40°-50°	494.7	18.3
50°-60°	431.0	15.9
60°-70°	298.8	11.0
70°-80°	141.0	5.2
80°-90°	30.3	1.1
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°	806.7	29.8
0°-40°	1310.3	48.4
0°-60°	2235.9	82.6
0°-90°	2706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2706.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1225	1225	1225	1225	1225	
5°	1227	1226	1154	1118	1115	116
15°	1168	1037	958	951	964	326
25°	1037	879	867	894	890	477
35°	910	732	773	837	951	570
45°	787	578	638	662	561	605
55°	621	450	572	413	409	555
65°	445	309	300	246	246	438
75°	230	157	118	84	82	243
85°	40	26	23	19	18	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1224.8	1224.8	1224.8	1224.8	1224.8
2.5°	1221.3	1237.7	1201.5	1187.5	1185.2
5°	1227.2	1226.0	1153.7	1117.6	1115.3
7.5°	1209.7	1178.2	1094.3	1053.5	1051.2
10°	1185.2	1130.4	1038.4	1002.2	1002.2
12.5°	1179.4	1085.0	992.9	968.4	975.4
15°	1167.7	1037.2	958.0	951.0	963.8
17.5°	1132.8	991.8	928.8	940.5	955.6
20°	1095.5	956.8	903.2	931.2	945.1
22.5°	1064.0	923.0	884.5	916.0	921.8
25°	1037.2	878.7	867.1	893.9	890.4
27.5°	1004.6	839.1	850.7	867.1	865.9
30°	969.6	804.1	826.3	842.6	857.7
32.5°	935.8	763.3	799.5	843.7	883.4
35°	910.2	731.9	772.7	836.8	951.0
37.5°	882.2	693.4	745.9	797.1	863.6
40°	851.9	651.5	717.9	789.0	705.1
42.5°	819.3	618.8	675.9	773.8	617.7
45°	786.6	578.0	637.5	661.9	560.6
47.5°	749.4	547.7	609.5	562.9	519.8
50°	705.1	517.4	590.9	503.5	477.8
52.5°	661.9	486.0	578.0	454.5	439.4
55°	621.2	449.8	572.2	412.6	409.1
57.5°	576.9	413.7	523.3	374.1	383.4
60°	536.1	378.8	437.0	341.5	334.5
62.5°	493.0	345.0	356.6	299.5	292.5
65°	445.2	308.8	299.5	245.9	245.9
67.5°	393.9	271.5	251.7	212.1	181.8
70°	340.3	235.4	206.3	160.8	142.2
72.5°	283.2	197.0	159.7	124.7	102.6
75°	229.6	157.3	117.7	83.9	81.6
77.5°	176.0	120.0	86.2	65.3	65.3
80°	125.9	86.2	51.3	50.1	51.3
82.5°	79.2	52.4	35.0	37.3	37.3
85°	39.6	25.6	23.3	18.6	17.5
87.5°	10.5	9.3	5.8	5.8	5.8
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	21.51	23.10	21.87	23.41	23.72	20.22	21.81	20.58	22.12	22.44
	3H	23.59	25.02	23.97	25.35	25.71	21.31	22.74	21.68	23.06	23.42
	4H	24.35	25.70	24.75	26.05	26.42	21.55	22.90	21.95	23.24	23.62
	6H	24.88	26.12	25.29	26.49	26.88	21.73	22.97	22.14	23.34	23.73
	8H	25.02	26.21	25.45	26.60	27.00	21.78	22.97	22.21	23.36	23.76
	12H	25.09	26.23	25.52	26.61	27.04	21.81	22.94	22.23	23.32	23.75
4H	2H	21.97	23.32	22.37	23.66	24.04	20.94	22.29	21.34	22.64	23.01
	3H	24.14	25.26	24.55	25.66	26.06	22.19	23.31	22.60	23.71	24.11
	4H	24.99	26.00	25.42	26.41	26.85	22.49	23.50	22.93	23.92	24.35
	6H	25.61	26.49	26.07	26.93	27.39	22.74	23.62	23.20	24.06	24.52
	8H	25.80	26.62	26.26	27.06	27.53	22.82	23.63	23.28	24.08	24.54
	12H	25.90	26.64	26.38	27.11	27.58	22.86	23.59	23.34	24.07	24.54
8H	4H	25.06	25.88	25.52	26.33	26.79	22.76	23.58	23.23	24.03	24.49
	6H	25.74	26.42	26.24	26.91	27.39	23.07	23.74	23.56	24.23	24.71
	8H	25.98	26.58	26.49	27.09	27.58	23.17	23.78	23.69	24.29	24.78
	12H	26.12	26.66	26.63	27.15	27.71	23.25	23.79	23.76	24.28	24.84
12H	4H	25.05	25.78	25.53	26.26	26.73	22.79	23.53	23.28	24.00	24.47
	6H	25.72	26.33	26.23	26.84	27.33	23.10	23.71	23.61	24.22	24.70
	8H	25.99	26.53	26.50	27.02	27.58	23.25	23.78	23.76	24.28	24.84