

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: P845570

Luminaire Tested: SQ2R-PH1-050D-940-UNV-STD-W-4

Issue Date: 6/14/2024

**Test Information**

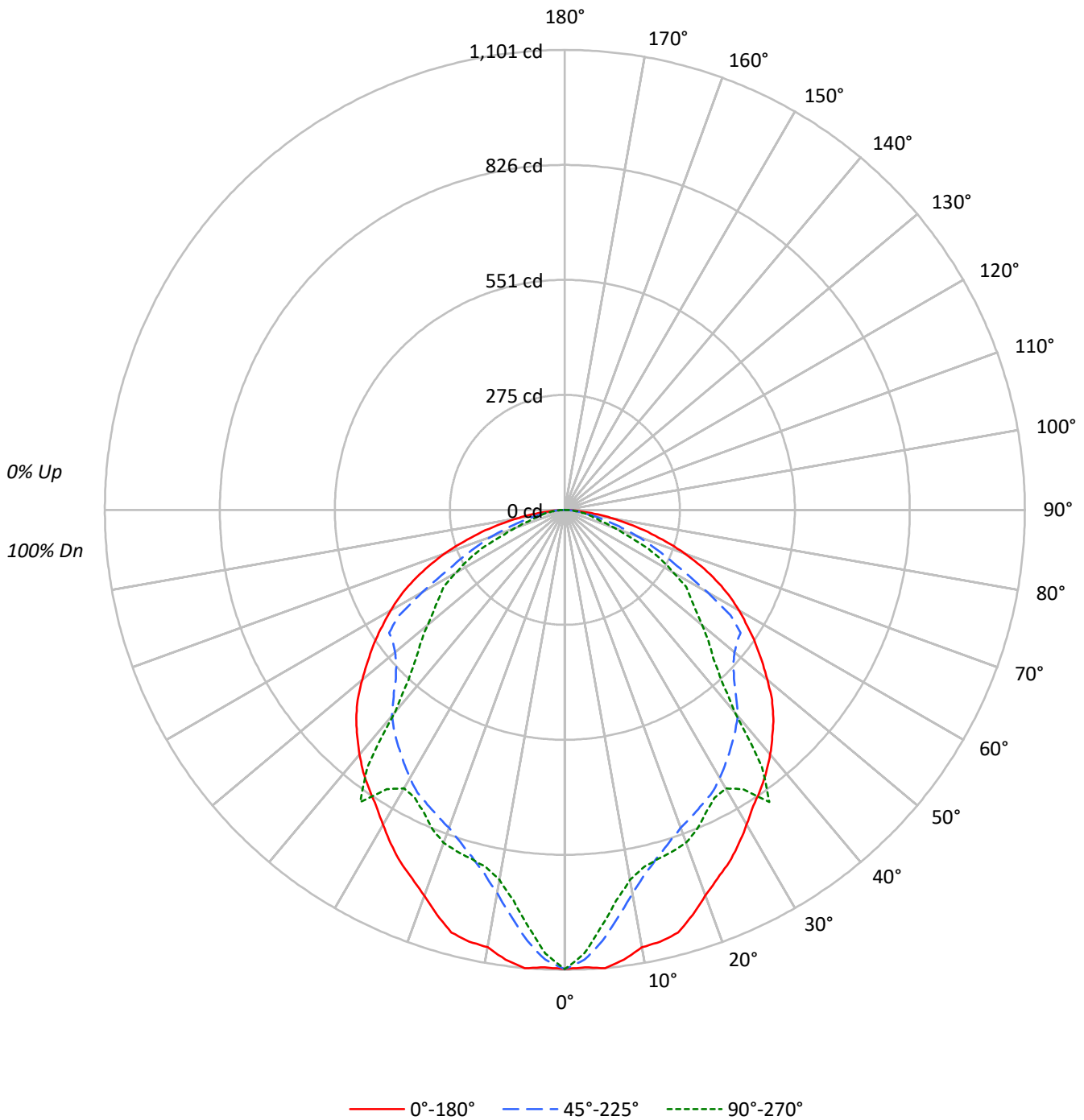
Test Method: LM-79-2019  
Report Number: P845570  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2R-PH1-050D-940-UNV-STD-W-4  
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE HEX CONTINUOUS LENS  
500 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2428.4 lumens  
Efficiency: N/A  
Efficacy: 136.4 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	84	79	76	81	77	74	72
3	91	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	55	64	59	55	53
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	38	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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

	0°	45°	90°
0°	17748	17748	17748
5°	17849	16781	16222
10°	17438	15278	14746
15°	17516	14370	14457
20°	16892	13926	14574
25°	16582	13862	14234
30°	16222	13824	14350
35°	16099	13667	16821
40°	16113	13578	13335
45°	16118	13063	11488
50°	15892	13318	10771
55°	15690	14455	10334
60°	15536	12665	9694
65°	15263	10269	8432
70°	14417	8738	6024
75°	12851	6588	4566
80°	10507	4277	4277
85°	6595	3872	2908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16118 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.0	4.0
10°-20°	254.2	10.5
20°-30°	372.8	15.4
30°-40°	451.9	18.6
40°-50°	443.9	18.3
50°-60°	386.7	15.9
60°-70°	268.1	11.0
70°-80°	126.5	5.2
80°-90°	27.2	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°	724.0	29.8
0°-40°	1175.9	48.4
0°-60°	2006.5	82.6
0°-90°	2428.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2428.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1099	1099	1099	1099	1099	
5°	1101	1100	1035	1003	1001	104
15°	1048	931	860	853	865	293
25°	931	789	778	802	799	428
35°	817	657	693	751	853	512
45°	706	519	572	594	503	543
55°	557	404	514	370	367	498
65°	400	277	269	221	221	393
75°	206	141	106	75	73	218
85°	36	23	21	17	16	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1099.2	1099.2	1099.2	1099.2	1099.2
2.5°	1096.0	1110.7	1078.3	1065.7	1063.6
5°	1101.3	1100.2	1035.4	1003.0	1000.9
7.5°	1085.6	1057.4	982.1	945.4	943.4
10°	1063.6	1014.5	931.9	899.4	899.4
12.5°	1058.4	973.7	891.1	869.1	875.4
15°	1047.9	930.8	859.7	853.4	864.9
17.5°	1016.6	890.0	833.5	844.0	857.6
20°	983.1	858.6	810.5	835.6	848.2
22.5°	954.9	828.3	793.8	822.0	827.3
25°	930.8	788.6	778.1	802.2	799.0
27.5°	901.5	753.0	763.5	778.1	777.1
30°	870.1	721.6	741.5	756.1	769.7
32.5°	839.8	685.0	717.5	757.2	792.8
35°	816.8	656.8	693.4	750.9	853.4
37.5°	791.7	622.3	669.3	715.4	775.0
40°	764.5	584.6	644.2	708.0	632.7
42.5°	735.2	555.3	606.6	694.4	554.3
45°	705.9	518.7	572.1	594.0	503.1
47.5°	672.5	491.5	547.0	505.1	466.4
50°	632.7	464.4	530.2	451.8	428.8
52.5°	594.0	436.1	518.7	407.9	394.3
55°	557.4	403.7	513.5	370.2	367.1
57.5°	517.7	371.3	469.6	335.7	344.1
60°	481.1	339.9	392.2	306.4	300.2
62.5°	442.4	309.6	320.0	268.8	262.5
65°	399.5	277.1	268.8	220.7	220.7
67.5°	353.5	243.7	225.9	190.3	163.2
70°	305.4	211.3	185.1	144.3	127.6
72.5°	254.1	176.7	143.3	111.9	92.0
75°	206.0	141.2	105.6	75.3	73.2
77.5°	157.9	107.7	77.4	58.6	58.6
80°	113.0	77.4	46.0	45.0	46.0
82.5°	71.1	47.1	31.4	33.5	33.5
85°	35.6	23.0	20.9	16.7	15.7
87.5°	9.4	8.4	5.2	5.2	5.2
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	21.13	22.72	21.50	23.03	23.35	19.84	21.43	20.21	21.75	22.06
	3H	23.21	24.64	23.59	24.97	25.33	20.93	22.36	21.31	22.69	23.05
	4H	23.98	25.32	24.38	25.67	26.05	21.18	22.52	21.57	22.87	23.24
	6H	24.50	25.74	24.91	26.11	26.50	21.36	22.60	21.77	22.96	23.35
	8H	24.65	25.83	25.07	26.22	26.62	21.41	22.59	21.83	22.98	23.38
	12H	24.72	25.85	25.15	26.23	26.66	21.43	22.56	21.86	22.94	23.37
4H	2H	21.60	22.94	22.00	23.29	23.67	20.57	21.91	20.97	22.26	22.64
	3H	23.77	24.89	24.18	25.28	25.68	21.81	22.93	22.22	23.33	23.73
	4H	24.61	25.62	25.04	26.03	26.47	22.12	23.13	22.55	23.54	23.98
	6H	25.24	26.12	25.69	26.56	27.01	22.37	23.24	22.82	23.68	24.14
	8H	25.43	26.24	25.89	26.69	27.15	22.44	23.26	22.90	23.70	24.17
	12H	25.53	26.26	26.01	26.74	27.21	22.48	23.21	22.96	23.69	24.16
8H	4H	24.69	25.51	25.15	25.95	26.42	22.39	23.21	22.85	23.65	24.12
	6H	25.37	26.05	25.86	26.54	27.01	22.69	23.37	23.18	23.86	24.33
	8H	25.60	26.21	26.11	26.71	27.20	22.80	23.40	23.31	23.91	24.40
	12H	25.75	26.28	26.25	26.77	27.34	22.87	23.41	23.38	23.90	24.46
12H	4H	24.67	25.41	25.15	25.88	26.35	22.42	23.15	22.90	23.63	24.10
	6H	25.35	25.96	25.86	26.46	26.95	22.72	23.33	23.23	23.84	24.33
	8H	25.61	26.15	26.12	26.64	27.20	22.87	23.41	23.38	23.90	24.46