

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: P845565

Luminaire Tested: SQ2R-PH1-050D-830-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845565
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-830-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE HEX CONTINUOUS LENS
500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

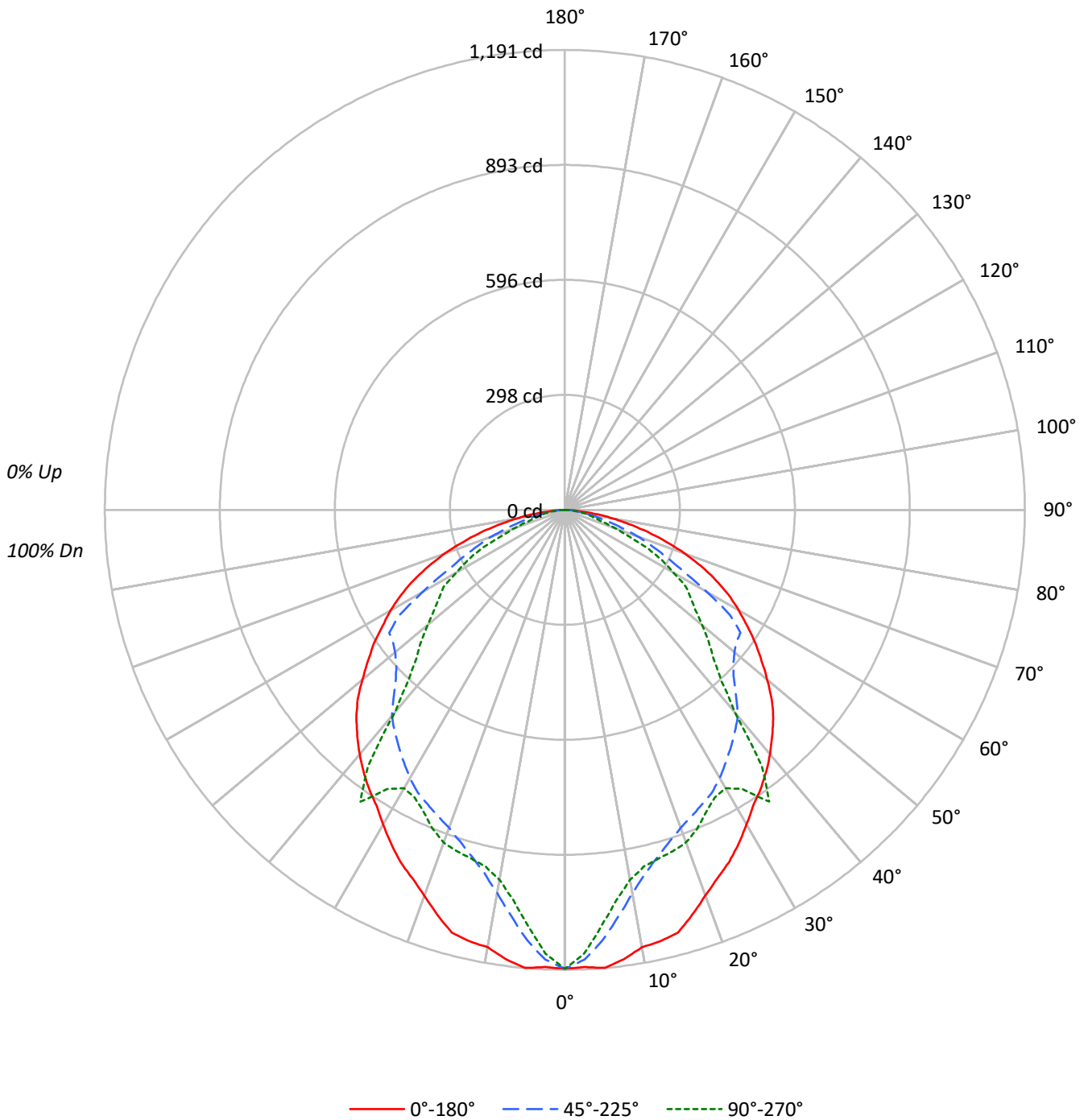
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2625.3 lumens
Efficiency: N/A
Efficacy: 147.5 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°	19186	19186	19186
5°	19297	18141	17537
10°	18853	16516	15942
15°	18937	15535	15629
20°	18261	15055	15754
25°	17927	14986	15389
30°	17538	14945	15515
35°	17404	14775	18185
40°	17420	14680	14417
45°	17427	14123	12417
50°	17181	14398	11645
55°	16963	15626	11173
60°	16795	13692	10479
65°	16500	11102	9116
70°	15583	9446	6510
75°	13893	7124	4934
80°	11353	4621	4621
85°	7114	4187	3149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17427 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	4.0
10°-20°	274.8	10.5
20°-30°	403.0	15.4
30°-40°	488.5	18.6
40°-50°	479.9	18.3
50°-60°	418.1	15.9
60°-70°	289.9	11.0
70°-80°	136.8	5.2
80°-90°	29.4	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°	782.7	29.8
0°-40°	1271.2	48.4
0°-60°	2169.2	82.6
0°-90°	2625.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2625.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1191	1189	1119	1084	1082	112
15°	1133	1006	929	923	935	316
25°	1006	852	841	867	864	463
35°	883	710	750	812	923	553
45°	763	561	618	642	544	587
55°	603	436	555	400	397	538
65°	432	300	291	239	239	425
75°	223	153	114	81	79	236
85°	38	25	23	18	17	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1188.3	<i>1188.3</i>	1188.3	1188.3	1188.3
2.5°	<i>1184.9</i>	<i>1200.7</i>	<i>1165.7</i>	<i>1152.1</i>	<i>1149.9</i>
5°	1190.6	<i>1189.4</i>	1119.3	1084.3	1082.0
7.5°	1173.6	<i>1143.1</i>	1061.7	1022.1	1019.8
10°	1149.9	<i>1096.7</i>	1007.4	972.4	972.4
12.5°	1144.2	<i>1052.6</i>	963.3	939.6	946.3
15°	1132.9	<i>1006.3</i>	929.4	922.6	935.0
17.5°	1099.0	<i>962.2</i>	901.1	912.4	927.1
20°	1062.8	<i>928.3</i>	876.2	903.4	916.9
22.5°	1032.3	<i>895.5</i>	858.2	888.7	894.3
25°	1006.3	<i>852.5</i>	841.2	867.2	863.8
27.5°	974.6	<i>814.1</i>	825.4	841.2	840.1
30°	940.7	<i>780.1</i>	801.6	817.5	832.2
32.5°	907.9	<i>740.6</i>	775.6	818.6	857.0
35°	883.0	<i>710.0</i>	749.6	811.8	922.6
37.5°	855.9	<i>672.7</i>	723.6	773.4	837.8
40°	826.5	<i>632.0</i>	696.5	765.4	684.0
42.5°	794.8	<i>600.4</i>	655.8	750.7	599.2
45°	763.2	<i>560.8</i>	618.5	642.2	543.8
47.5°	727.0	<i>531.4</i>	591.3	546.1	504.3
50°	684.0	<i>502.0</i>	573.2	488.4	463.6
52.5°	642.2	<i>471.5</i>	560.8	441.0	426.3
55°	602.6	<i>436.4</i>	555.1	400.2	396.9
57.5°	559.7	<i>401.4</i>	507.7	362.9	372.0
60°	520.1	<i>367.5</i>	424.0	331.3	324.5
62.5°	478.3	<i>334.7</i>	346.0	290.6	283.8
65°	431.9	<i>299.6</i>	290.6	238.6	238.6
67.5°	382.2	<i>263.4</i>	244.2	205.8	176.4
70°	330.1	<i>228.4</i>	200.1	156.0	137.9
72.5°	274.7	<i>191.1</i>	154.9	121.0	99.5
75°	222.7	<i>152.6</i>	114.2	81.4	79.1
77.5°	170.7	<i>116.5</i>	83.7	63.3	63.3
80°	122.1	<i>83.7</i>	49.7	48.6	49.7
82.5°	76.9	<i>50.9</i>	33.9	36.2	36.2
85°	38.4	<i>24.9</i>	22.6	18.1	17.0
87.5°	10.2	<i>9.0</i>	5.7	5.7	5.7
90°	0.0	<i>0.0</i>	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	21.40	22.99	21.77	23.31	23.62	20.11	21.70	20.48	22.02	22.33
	3H	23.48	24.91	23.86	25.24	25.60	21.20	22.63	21.58	22.96	23.32
	4H	24.25	25.59	24.65	25.94	26.32	21.45	22.79	21.84	23.14	23.51
	6H	24.77	26.01	25.18	26.38	26.77	21.63	22.87	22.04	23.23	23.62
	8H	24.92	26.10	25.34	26.49	26.89	21.68	22.86	22.10	23.25	23.65
	12H	24.99	26.12	25.42	26.50	26.93	21.70	22.83	22.13	23.21	23.64
4H	2H	21.87	23.21	22.27	23.56	23.94	20.84	22.18	21.24	22.53	22.91
	3H	24.04	25.16	24.45	25.55	25.96	22.08	23.20	22.49	23.60	24.00
	4H	24.88	25.89	25.31	26.30	26.74	22.39	23.40	22.82	23.81	24.25
	6H	25.51	26.39	25.96	26.83	27.29	22.64	23.51	23.09	23.95	24.41
	8H	25.70	26.51	26.16	26.96	27.42	22.71	23.53	23.17	23.97	24.44
	12H	25.80	26.53	26.28	27.01	27.48	22.75	23.48	23.23	23.96	24.43
8H	4H	24.96	25.78	25.42	26.22	26.69	22.66	23.48	23.12	23.92	24.39
	6H	25.64	26.32	26.13	26.81	27.28	22.96	23.64	23.45	24.13	24.60
	8H	25.87	26.48	26.38	26.99	27.47	23.07	23.67	23.58	24.18	24.67
	12H	26.02	26.55	26.52	27.04	27.61	23.14	23.68	23.65	24.17	24.73
12H	4H	24.94	25.68	25.42	26.15	26.62	22.69	23.42	23.17	23.90	24.37
	6H	25.62	26.23	26.13	26.73	27.22	22.99	23.60	23.50	24.11	24.60
	8H	25.88	26.42	26.39	26.91	27.47	23.14	23.68	23.65	24.17	24.73