

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: P845579

Luminaire Tested: SQ2R-PH1-100D-840-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845579
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-PH1-100D-840-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE HEX CONTINUOUS LENS
1000 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

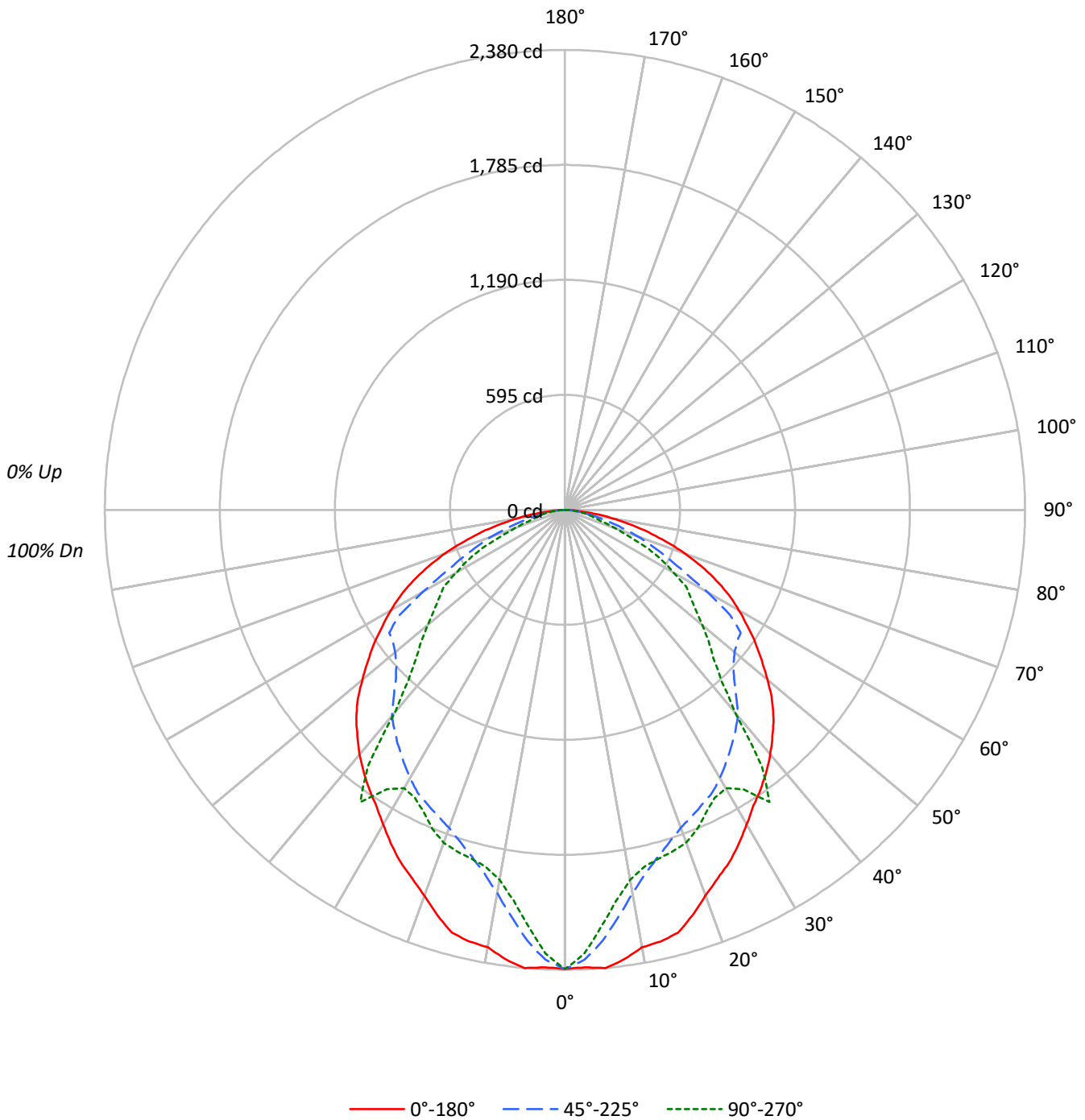
Lumens per Lamp: N/A
Luminaire Lumens: 5248.5 lumens
Efficiency: N/A
Efficacy: 139.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.03 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9969
Total Harmonic Distortion (THDi): 0.066
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°	38358	38358	38358
5°	38577	36269	35060
10°	37689	33019	31870
15°	37859	31057	31246
20°	36507	30100	31498
25°	35838	29959	30765
30°	35061	29878	31016
35°	34795	29538	36356
40°	34825	29347	28823
45°	34840	28232	24825
50°	34350	28786	23280
55°	33914	31240	22334
60°	33577	27370	20948
65°	32989	22193	18220
70°	31157	18888	13020
75°	27779	14242	9869
80°	22696	9252	9252
85°	14246	8373	6280

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 34840 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.6	4.0
10°-20°	549.4	10.5
20°-30°	805.7	15.4
30°-40°	976.7	18.6
40°-50°	959.5	18.3
50°-60°	835.8	15.9
60°-70°	579.5	11.0
70°-80°	273.5	5.2
80°-90°	58.8	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°	1564.7	29.8
0°-40°	2541.4	48.4
0°-60°	4336.7	82.6
0°-90°	5248.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5248.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2376	2376	2376	2376	2376	
5°	2380	2378	2238	2168	2163	224
15°	2265	2012	1858	1844	1869	633
25°	2012	1704	1682	1734	1727	926
35°	1765	1420	1499	1623	1844	1106
45°	1526	1121	1236	1284	1087	1174
55°	1205	872	1110	800	793	1076
65°	864	599	581	477	477	850
75°	445	305	228	163	158	471
85°	77	50	45	36	34	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2375.7	2375.7	2375.7	2375.7	2375.7
2.5°	2368.9	2400.5	2330.4	2303.3	2298.8
5°	2380.2	2377.9	2237.8	2167.7	2163.2
7.5°	2346.3	2285.2	2122.5	2043.4	2038.9
10°	2298.8	2192.6	2014.0	1943.9	1943.9
12.5°	2287.5	2104.4	1925.8	1878.4	1891.9
15°	2264.9	2011.7	1858.0	1844.5	1869.3
17.5°	2197.1	1923.6	1801.5	1824.1	1853.5
20°	2124.7	1855.8	1751.8	1806.0	1833.2
22.5°	2063.7	1790.2	1715.6	1776.7	1788.0
25°	2011.7	1704.3	1681.7	1733.7	1726.9
27.5°	1948.4	1627.5	1650.1	1681.7	1679.5
30°	1880.6	1559.7	1602.6	1634.2	1663.6
32.5°	1815.1	1480.5	1550.6	1636.5	1713.4
35°	1765.3	1419.5	1498.6	1622.9	1844.5
37.5°	1711.1	1344.9	1446.6	1546.1	1674.9
40°	1652.3	1263.5	1392.4	1530.3	1367.5
42.5°	1589.0	1200.3	1311.0	1500.9	1198.0
45°	1525.8	1121.1	1236.4	1283.9	1087.2
47.5°	1453.4	1062.4	1182.2	1091.8	1008.1
50°	1367.5	1003.6	1146.0	976.5	926.8
52.5°	1283.9	942.6	1121.1	881.5	852.2
55°	1204.8	872.5	1109.8	800.2	793.4
57.5°	1118.9	802.4	1014.9	725.6	743.7
60°	1039.8	734.6	847.6	662.3	648.7
62.5°	956.1	669.1	691.7	580.9	567.4
65°	863.5	599.0	580.9	476.9	476.9
67.5°	764.0	526.7	488.2	411.4	352.6
70°	660.0	456.6	400.1	311.9	275.8
72.5°	549.3	382.0	309.7	241.9	198.9
75°	445.3	305.2	228.3	162.7	158.2
77.5°	341.3	232.8	167.3	126.6	126.6
80°	244.1	167.3	99.5	97.2	99.5
82.5°	153.7	101.7	67.8	72.3	72.3
85°	76.9	49.7	45.2	36.2	33.9
87.5°	20.3	18.1	11.3	11.3	11.3
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	23.81	25.40	24.17	25.71	26.03	22.52	24.11	22.88	24.42	24.74
	3H	25.89	27.32	26.27	27.65	28.01	23.61	25.04	23.98	25.36	25.72
	4H	26.66	28.00	27.05	28.35	28.72	23.85	25.20	24.25	25.54	25.92
	6H	27.18	28.42	27.59	28.79	29.18	24.03	25.28	24.44	25.64	26.03
	8H	27.32	28.51	27.75	28.90	29.30	24.09	25.27	24.51	25.66	26.06
	12H	27.39	28.53	27.82	28.91	29.34	24.11	25.24	24.54	25.62	26.05
4H	2H	24.27	25.62	24.67	25.97	26.34	23.25	24.59	23.64	24.94	25.31
	3H	26.44	27.56	26.85	27.96	28.36	24.49	25.61	24.90	26.01	26.41
	4H	27.29	28.30	27.72	28.71	29.15	24.80	25.80	25.23	26.22	26.65
	6H	27.92	28.79	28.37	29.23	29.69	25.04	25.92	25.50	26.36	26.82
	8H	28.10	28.92	28.56	29.36	29.83	25.12	25.94	25.58	26.38	26.84
	12H	28.20	28.94	28.69	29.42	29.89	25.16	25.89	25.64	26.37	26.84
8H	4H	27.36	28.18	27.83	28.63	29.09	25.07	25.88	25.53	26.33	26.79
	6H	28.05	28.72	28.54	29.21	29.69	25.37	26.04	25.86	26.53	27.01
	8H	28.28	28.88	28.79	29.39	29.88	25.48	26.08	25.99	26.59	27.08
	12H	28.42	28.96	28.93	29.45	30.01	25.55	26.09	26.06	26.58	27.14
12H	4H	27.35	28.08	27.83	28.56	29.03	25.10	25.83	25.58	26.31	26.78
	6H	28.02	28.63	28.54	29.14	29.63	25.40	26.01	25.91	26.52	27.00
	8H	28.29	28.83	28.80	29.32	29.88	25.55	26.09	26.06	26.58	27.14