

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: P845555

Luminaire Tested: SQ2R-PC3-100D-840-UNV-STD-W-4

Issue Date: 6/14/2024

**Test Information**

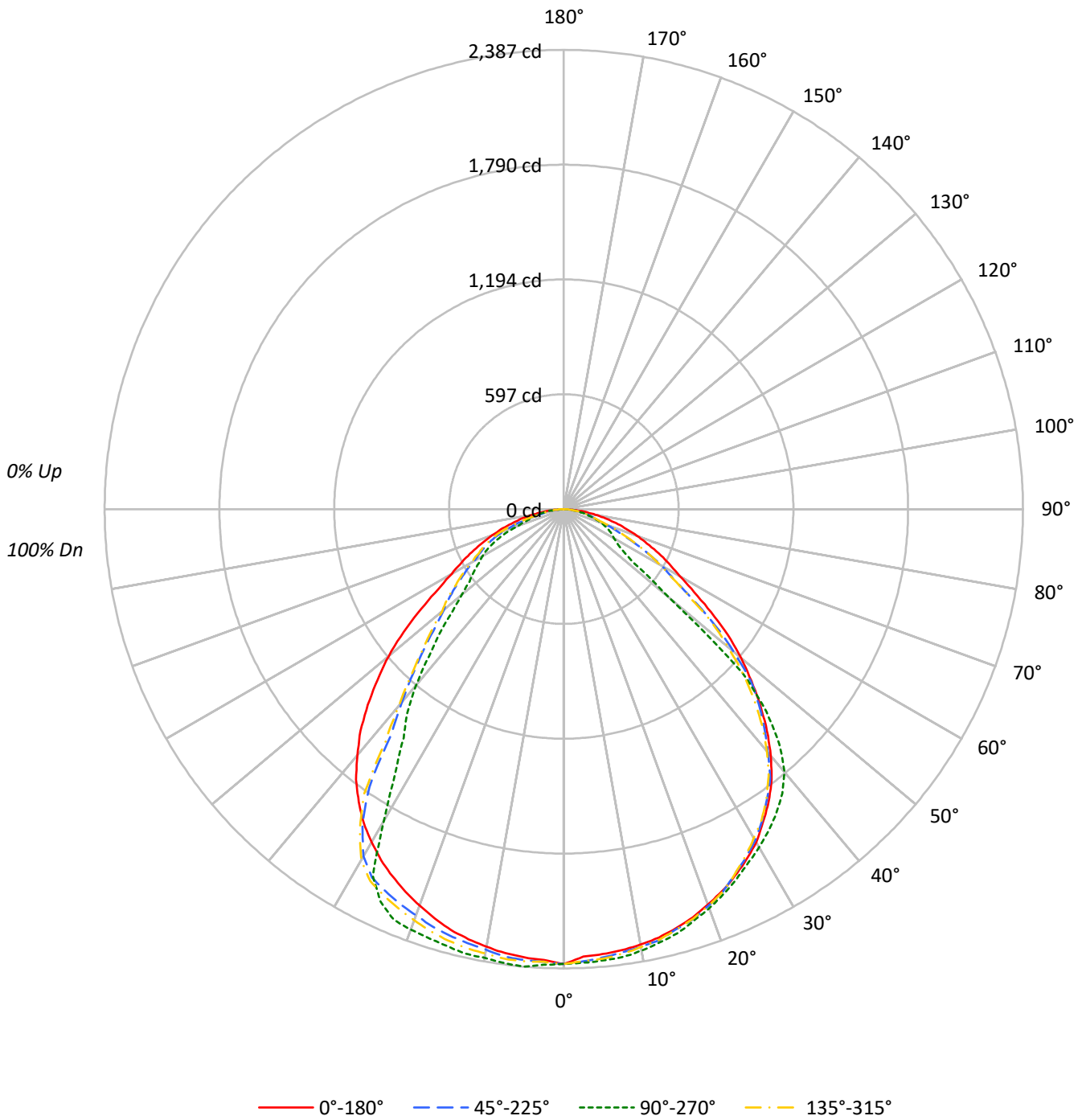
Test Method: LM-79-2019  
Report Number: P845555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2R-PC3-100D-840-UNV-STD-W-4  
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE PYRAMID CONTINUOUS LENS  
1000 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5300.7 lumens  
Efficiency: N/A  
Efficacy: 141.0 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.21 / 1.25  
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	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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				75
3	93	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	63	59	57				57
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50				50
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44				44
7	69	57	48	43	67	56	48	42	54	47	42	53	47	42	52	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	60	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	31	41	35	31	30				30

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

	0°	90°	180°	270°
0°	38175	38175	38175	38175
5°	37624	38174	37917	38687
10°	37689	38207	37874	38838
15°	37708	38161	37859	39295
20°	37594	37945	37673	39964
25°	37490	37812	37531	40107
30°	37295	37843	37254	34809
35°	36622	38004	36622	28604
40°	35302	37637	35160	25155
45°	32981	34013	32878	20799
50°	30263	17942	29866	17317
55°	26342	10370	25450	16099
60°	22481	9707	21752	15765
65°	20814	9929	20122	14938
70°	19100	9711	18567	11844
75°	17486	8740	16918	10717
80°	15556	7773	14709	10721
85°	11726	4187	10893	5446

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 34013 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	224.2	4.2
10°-20°	647.7	12.2
20°-30°	989.7	18.7
30°-40°	1118.5	21.1
40°-50°	977.7	18.4
50°-60°	646.9	12.2
60°-70°	422.7	8.0
70°-80°	221.2	4.2
80°-90°	52.2	1.0
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°	1861.6	35.1
0°-40°	2980.1	56.2
0°-60°	4604.6	86.9
0°-90°	5300.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5300.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2364	2364	2364	2364	2364	
5°	2321	2355	2340	2387	2321	221
15°	2256	2283	2265	2351	2256	637
25°	2104	2122	2107	2251	2104	970
35°	1858	1928	1858	1451	1858	1158
45°	1444	1490	1440	911	1444	1112
55°	936	368	904	572	936	840
65°	545	260	527	391	545	539
75°	280	140	271	172	280	298
85°	63	23	59	29	63	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4
2.5°	2328.2	2387.0	2353.0	2350.8	2359.8	2362.1	2350.8	2375.7	2346.3	2377.9	2355.3
5°	2321.4	2380.2	2339.5	2335.0	2355.3	2348.5	2346.3	2368.9	2339.5	2364.4	2353.0
7.5°	2312.4	2366.6	2323.7	2321.4	2348.5	2339.5	2330.4	2357.6	2328.2	2355.3	2346.3
10°	2298.8	2346.3	2310.1	2312.4	2330.4	2321.4	2312.4	2335.0	2310.1	2344.0	2325.9
12.5°	2280.7	2328.2	2294.3	2287.5	2307.8	2292.0	2292.0	2310.1	2289.8	2325.9	2310.1
15°	2255.9	2303.3	2260.4	2264.9	2283.0	2267.2	2262.6	2285.2	2264.9	2301.1	2294.3
17.5°	2226.5	2267.2	2235.5	2237.8	2244.6	2237.8	2233.3	2251.3	2231.0	2269.4	2273.9
20°	2188.0	2235.5	2194.8	2194.8	2208.4	2190.3	2194.8	2210.6	2192.6	2237.8	2246.8
22.5°	2149.6	2194.8	2156.4	2156.4	2167.7	2142.8	2154.1	2165.4	2151.9	2201.6	2221.9
25°	2104.4	2140.6	2097.6	2111.2	2122.5	2099.9	2097.6	2115.7	2106.7	2156.4	2192.6
27.5°	2054.7	2086.3	2045.6	2063.7	2075.0	2059.2	2038.9	2061.5	2056.9	2113.5	2158.7
30°	2000.4	2029.8	1989.1	2014.0	2029.8	2007.2	1975.6	1995.9	1998.2	2063.7	2081.8
32.5°	1928.1	1957.5	1919.1	1959.7	1982.3	1950.7	1914.5	1925.8	1934.9	2000.4	1948.4
35°	1858.0	1871.6	1842.2	1894.2	1928.1	1889.7	1835.4	1849.0	1858.0	1932.6	1763.1
37.5°	1774.4	1774.4	1763.1	1819.6	1864.8	1808.3	1749.5	1756.3	1774.4	1837.7	1469.2
40°	1674.9	1661.4	1650.1	1724.7	1785.7	1711.1	1641.0	1643.3	1668.2	1684.0	1308.8
42.5°	1564.2	1548.4	1543.8	1622.9	1659.1	1598.1	1525.8	1528.0	1564.2	1471.5	1159.6
45°	1444.4	1437.6	1433.1	1487.3	1489.6	1451.2	1399.2	1410.5	1439.9	1270.3	1026.2
47.5°	1322.3	1317.8	1315.5	1272.6	1263.5	1236.4	1263.5	1288.4	1313.3	1060.1	904.1
50°	1204.8	1173.1	1155.1	996.8	714.3	981.0	1112.1	1155.1	1189.0	924.5	813.7
52.5°	1075.9	1048.8	992.3	761.7	452.1	757.2	974.2	1028.5	1048.8	840.9	745.9
55°	935.8	935.8	813.7	488.2	368.4	513.1	800.2	920.0	904.1	752.7	669.1
57.5°	802.4	829.6	675.9	327.8	325.5	327.8	671.3	818.3	773.0	682.6	605.8
60°	696.2	736.9	585.4	291.6	300.6	287.1	574.1	727.8	673.6	608.0	535.7
62.5°	617.1	651.0	483.7	266.7	282.5	262.2	486.0	648.7	596.7	553.8	488.2
65°	544.8	578.7	382.0	244.1	259.9	239.6	393.3	574.1	526.7	492.8	445.3
67.5°	467.9	499.5	302.9	221.5	232.8	219.3	316.5	499.5	456.6	434.0	388.8
70°	404.6	440.8	230.6	198.9	205.7	196.7	246.4	431.7	393.3	384.3	332.3
72.5°	341.3	370.7	178.6	176.3	174.0	171.8	180.8	368.4	332.3	316.5	257.7
75°	280.3	300.6	146.9	146.9	140.1	142.4	146.9	300.6	271.2	257.7	183.1
77.5°	221.5	237.3	119.8	115.3	108.5	108.5	117.5	230.6	214.7	198.9	122.1
80°	167.3	171.8	90.4	85.9	83.6	83.6	90.4	167.3	158.2	142.4	94.9
82.5°	113.0	94.9	61.0	63.3	61.0	61.0	58.8	97.2	106.2	72.3	70.1
85°	63.3	42.9	38.4	29.4	22.6	24.9	36.2	40.7	58.8	38.4	45.2
87.5°	22.6	18.1	6.8	9.0	6.8	6.8	6.8	18.1	18.1	13.6	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2364.4	2364.4	2364.4	2364.4	2364.4	2364.4
2.5°	2357.6	2371.1	2368.9	2355.3	2384.7	2328.2
5°	2359.8	2387.0	2373.4	2359.8	2377.9	2321.4
7.5°	2348.5	2380.2	2364.4	2357.6	2375.7	2312.4
10°	2341.7	2368.9	2355.3	2346.3	2364.4	2298.8
12.5°	2335.0	2366.6	2348.5	2337.2	2348.5	2280.7
15°	2316.9	2350.8	2339.5	2321.4	2321.4	2255.9
17.5°	2303.3	2337.2	2325.9	2301.1	2289.8	2226.5
20°	2294.3	2325.9	2310.1	2273.9	2255.9	2188.0
22.5°	2273.9	2310.1	2285.2	2246.8	2221.9	2149.6
25°	2237.8	2251.3	2249.1	2215.2	2174.5	2104.4
27.5°	2142.8	2149.6	2156.4	2179.0	2133.8	2054.7
30°	1977.8	1867.1	2005.0	2106.7	2084.1	2000.4
32.5°	1665.9	1629.7	1711.1	1973.3	2018.5	1928.1
35°	1494.1	1451.2	1519.0	1810.6	1943.9	1858.0
37.5°	1338.1	1338.1	1356.2	1521.2	1860.3	1774.4
40°	1227.4	1193.5	1243.2	1333.6	1733.7	1674.9
42.5°	1048.8	1037.5	1069.2	1175.4	1541.6	1564.2
45°	924.5	910.9	940.3	1042.0	1333.6	1444.4
47.5°	829.6	779.8	845.4	929.0	1130.2	1322.3
50°	741.4	689.4	752.7	825.0	958.4	1204.8
52.5°	664.6	617.1	680.4	759.5	870.2	1075.9
55°	585.4	571.9	601.3	684.9	784.3	935.8
57.5°	519.9	524.4	528.9	619.3	705.2	802.4
60°	479.2	488.2	486.0	556.1	639.7	696.2
62.5°	438.5	443.0	443.0	499.5	576.4	617.1
65°	391.0	391.0	395.6	458.9	522.1	544.8
67.5°	339.1	330.0	345.8	404.6	463.4	467.9
70°	266.7	250.9	278.0	350.4	413.6	404.6
72.5°	192.1	201.2	196.7	275.8	354.9	341.3
75°	158.2	171.8	160.5	196.7	289.3	280.3
77.5°	133.4	144.7	133.4	126.6	232.8	221.5
80°	106.2	115.3	106.2	97.2	171.8	167.3
82.5°	76.9	79.1	76.9	72.3	113.0	113.0
85°	36.2	29.4	40.7	47.5	45.2	63.3
87.5°	6.8	6.8	6.8	9.0	24.9	22.6
90°	0.0	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	22.88	24.37	23.24	24.68	24.99	20.38	21.87	20.74	22.18	22.49
	3H	24.52	25.85	24.90	26.18	26.54	21.86	23.19	22.24	23.52	23.88
	4H	25.12	26.36	25.52	26.71	27.09	22.31	23.56	22.71	23.91	24.29
	6H	25.55	26.70	25.96	27.07	27.46	22.70	23.85	23.12	24.22	24.61
	8H	25.67	26.77	26.10	27.16	27.56	22.82	23.92	23.25	24.31	24.71
	12H	25.74	26.79	26.17	27.17	27.60	22.86	23.91	23.29	24.29	24.72
4H	2H	23.15	24.39	23.55	24.74	25.12	21.19	22.44	21.59	22.79	23.17
	3H	25.04	26.08	25.45	26.48	26.88	22.84	23.87	23.25	24.27	24.67
	4H	25.79	26.72	26.22	27.13	27.57	23.34	24.27	23.78	24.69	25.13
	6H	26.38	27.18	26.84	27.63	28.09	23.82	24.62	24.28	25.07	25.53
	8H	26.55	27.30	27.02	27.75	28.22	23.97	24.72	24.43	25.16	25.63
	12H	26.65	27.32	27.13	27.80	28.27	24.03	24.70	24.51	25.18	25.65
8H	4H	25.86	26.61	26.32	27.06	27.52	23.65	24.41	24.12	24.85	25.32
	6H	26.55	27.17	27.04	27.66	28.14	24.20	24.82	24.70	25.32	25.79
	8H	26.78	27.34	27.30	27.85	28.34	24.41	24.96	24.92	25.47	25.96
	12H	26.93	27.42	27.44	27.92	28.48	24.52	25.01	25.03	25.50	26.07
12H	4H	25.84	26.51	26.33	26.99	27.46	23.69	24.36	24.17	24.84	25.31
	6H	26.53	27.09	27.04	27.60	28.09	24.25	24.81	24.76	25.32	25.81
	8H	26.81	27.30	27.32	27.79	28.36	24.50	24.99	25.01	25.48	26.05