

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: P855558

Luminaire Tested: SQ2-FA-075D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

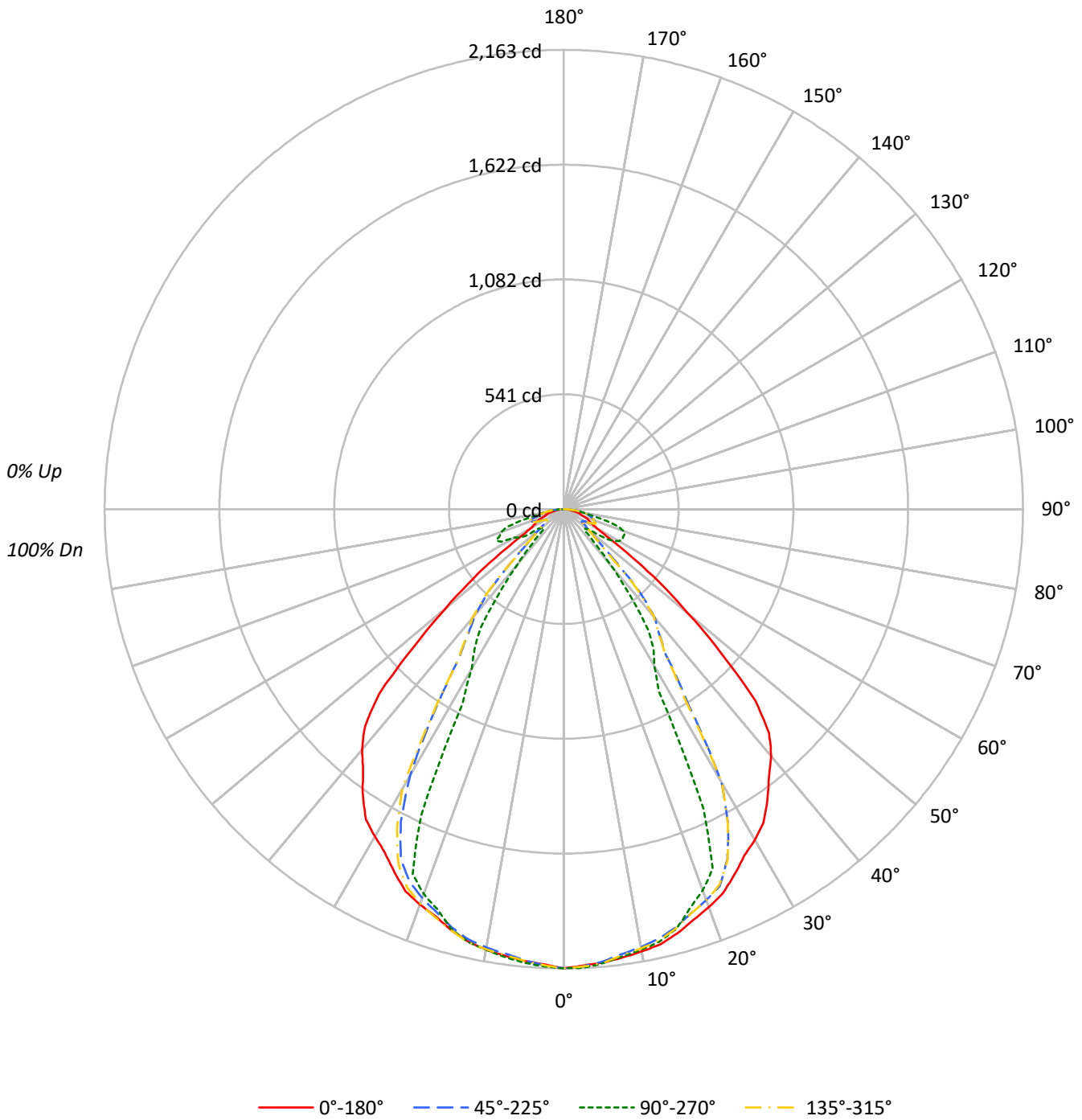
Test Method: LM-79-2019  
Report Number: P855558  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-075D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 750 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3158.5 lumens  
Efficiency: N/A  
Efficacy: 118.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				78
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63				63
5	84	74	66	61	82	73	66	60	71	65	60	69	64	59	67	62	59	57				57
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52				52
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	48				48
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	46	44				44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41				41
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38				38

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

	0°	90°	180°	270°
0°	34920	34920	34920	34920
5°	34734	34788	34603	34762
10°	34682	34549	34549	34549
15°	34571	34215	34298	34215
20°	34302	32845	34050	33154
25°	33852	27720	33620	28303
30°	33542	15905	33176	16117
35°	32952	13663	32534	13470
40°	32039	7185	31147	7116
45°	29124	3089	28081	3089
50°	19216	3730	18231	3481
55°	10745	6888	10193	6244
60°	5793	9691	5690	8690
65°	5112	11775	5360	13398
70°	4773	14091	4541	14861
75°	4479	12108	4579	12514
80°	3794	8638	3794	9103
85°	3335	4835	3020	5743

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 29124 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.5	6.4
10°-20°	577.4	18.3
20°-30°	787.3	24.9
30°-40°	661.6	20.9
40°-50°	375.8	11.9
50°-60°	199.4	6.3
60°-70°	183.6	5.8
70°-80°	134.8	4.3
80°-90°	35.2	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°	1568.2	49.7
0°-40°	2229.8	70.6
0°-60°	2805.0	88.8
0°-90°	3158.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3158.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2163	2163	2163	2163	2163	
5°	2143	2146	2135	2145	2143	204
15°	2068	2047	2052	2047	2068	583
25°	1900	1556	1887	1589	1900	876
35°	1672	693	1651	683	1672	1044
45°	1276	135	1230	135	1276	933
55°	382	245	362	222	382	368
65°	134	308	140	351	134	134
75°	72	194	73	201	72	74
85°	18	26	16	31	18	21
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°	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8
2.5°	2151.0	2182.9	2154.9	2151.3	2162.8	2160.2	2156.2	2171.3	2145.8	2171.3	2151.0
5°	2143.1	2179.9	2138.3	2127.3	2146.4	2133.6	2144.8	2166.9	2135.0	2163.7	2131.7
7.5°	2129.8	2162.4	2112.5	2105.5	2124.3	2113.1	2117.7	2148.4	2121.7	2140.5	2111.6
10°	2115.4	2144.2	2094.3	2089.8	2107.3	2096.1	2100.7	2132.8	2107.3	2124.8	2095.9
12.5°	2099.8	2122.1	2072.1	2070.1	2085.1	2077.8	2079.9	2106.8	2086.4	2104.0	2076.3
15°	2068.2	2088.9	2038.8	2031.0	2046.9	2040.6	2043.8	2067.8	2051.9	2063.0	2038.8
17.5°	2029.1	2045.6	1995.7	1972.3	1972.9	1980.9	1995.7	2024.8	2010.4	2025.1	1990.8
20°	1996.4	2015.5	1960.5	1914.7	1911.6	1919.6	1960.5	1989.7	1981.7	1997.6	1949.1
22.5°	1958.5	1971.3	1921.4	1844.1	1833.3	1841.3	1916.1	1950.7	1947.8	1958.6	1898.2
25°	1900.2	1912.9	1821.9	1710.7	1556.0	1701.2	1825.1	1887.2	1887.2	1896.7	1816.9
27.5°	1840.8	1841.1	1676.4	1098.6	969.2	1059.1	1674.1	1808.6	1823.8	1819.1	1662.4
30°	1799.1	1787.9	1485.9	888.1	853.1	875.3	1487.5	1754.0	1779.5	1761.9	1448.4
32.5°	1750.8	1719.1	1097.1	816.6	787.8	807.6	1060.9	1689.2	1733.8	1695.9	1139.1
35°	1671.8	1588.9	836.7	721.9	693.2	718.7	830.2	1561.3	1650.6	1548.5	864.5
37.5°	1586.6	1262.9	736.6	575.0	513.1	562.6	733.0	1249.4	1552.1	1220.4	735.9
40°	1520.1	992.3	662.2	420.6	340.9	396.7	657.4	946.7	1477.8	1018.4	645.9
42.5°	1431.4	871.6	531.7	267.2	209.1	244.6	509.9	851.5	1386.4	882.5	514.1
45°	1275.5	749.2	314.8	146.5	135.3	141.8	290.3	735.4	1229.8	719.4	321.3
47.5°	1010.2	571.4	202.3	124.6	136.7	124.6	196.1	553.2	954.1	552.3	201.9
50°	765.0	446.0	156.6	126.1	148.5	126.1	151.7	430.8	725.8	470.7	154.9
52.5°	566.7	372.7	127.9	138.3	178.4	140.8	124.3	362.8	538.0	379.7	121.0
55°	381.7	292.4	102.8	182.5	244.7	187.2	102.8	283.9	362.1	280.7	99.5
57.5°	242.1	217.5	104.0	234.6	279.3	239.0	105.7	209.6	232.2	210.5	91.4
60°	179.4	171.4	115.8	249.1	300.1	252.2	117.5	165.0	176.2	163.4	97.9
62.5°	148.1	135.0	139.3	269.8	311.8	262.8	142.2	128.8	154.0	123.4	108.3
65°	133.8	87.5	164.7	273.2	308.2	273.2	166.3	82.9	140.3	89.2	146.8
67.5°	120.8	64.9	159.2	271.4	310.2	271.9	155.2	61.8	115.8	60.3	150.0
70°	101.1	58.1	150.0	276.1	298.5	266.6	150.0	56.3	96.2	54.7	176.2
72.5°	84.1	55.2	139.6	255.0	264.6	245.5	140.9	54.8	84.5	49.4	165.8
75°	71.8	54.3	133.8	203.6	194.1	194.1	130.5	52.7	73.4	49.5	128.9
77.5°	53.8	48.1	110.9	133.0	125.6	125.6	109.0	46.5	51.2	43.5	104.7
80°	40.8	44.0	91.4	97.8	92.9	92.9	88.1	42.4	40.8	40.8	86.5
82.5°	31.7	37.4	70.4	71.7	68.2	66.9	68.5	37.1	31.7	34.1	66.8
85°	18.0	25.9	37.5	30.9	26.1	24.5	35.8	24.3	16.3	24.3	35.8
87.5°	6.6	11.6	5.2	5.2	5.2	5.2	5.2	11.6	6.6	10.4	6.6
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°	2162.8	2162.8	2162.8	2162.8	2162.8	2162.8
2.5°	2146.0	2154.9	2154.9	2149.7	2175.2	2151.0
5°	2124.1	2144.8	2135.2	2135.0	2167.1	2143.1
7.5°	2108.8	2128.2	2119.3	2117.5	2148.9	2129.8
10°	2092.9	2107.3	2101.0	2105.7	2134.7	2115.4
12.5°	2070.8	2087.7	2081.4	2088.7	2115.1	2099.8
15°	2032.6	2046.9	2050.2	2053.5	2084.1	2068.2
17.5°	1969.5	1976.5	1992.4	2015.0	2046.9	2029.1
20°	1919.9	1929.6	1939.1	1978.4	2015.5	1996.4
22.5°	1863.5	1860.4	1882.7	1928.9	1975.1	1958.5
25°	1711.5	1588.7	1724.2	1843.1	1904.9	1900.2
27.5°	1191.7	1034.1	1173.5	1701.2	1831.2	1840.8
30°	937.9	864.5	936.2	1518.5	1776.7	1799.1
32.5°	832.6	782.3	825.9	1155.7	1708.1	1750.8
35°	718.5	683.4	718.5	864.5	1573.0	1671.8
37.5°	575.2	503.4	573.8	747.0	1271.5	1586.6
40°	428.5	337.6	415.7	668.8	1016.2	1520.1
42.5°	285.5	217.5	270.2	526.5	879.0	1431.4
45°	154.6	135.3	148.1	318.0	717.3	1275.5
47.5°	121.2	128.2	121.2	200.6	548.7	1010.2
50°	116.3	138.6	116.3	154.9	454.0	765.0
52.5°	126.7	150.4	125.5	122.3	370.5	566.7
55°	143.7	221.8	145.3	99.5	271.6	381.7
57.5°	204.5	249.5	206.8	94.3	209.2	242.1
60°	210.1	269.1	208.5	99.5	161.9	179.4
62.5°	248.5	333.1	248.2	113.9	120.3	148.1
65°	318.7	350.7	322.0	145.2	85.9	133.8
67.5°	302.6	325.3	299.4	155.6	59.1	120.8
70°	297.2	314.8	294.1	177.7	54.8	101.1
72.5°	277.3	279.6	271.6	164.7	49.4	84.1
75°	214.9	200.6	207.0	141.9	49.4	71.8
77.5°	133.6	127.9	128.8	108.3	43.6	53.8
80°	101.1	97.9	96.2	91.4	40.8	40.8
82.5°	75.0	71.8	70.2	70.4	34.1	31.7
85°	34.1	31.0	29.4	40.8	24.3	18.0
87.5°	6.6	6.6	5.2	6.6	9.0	6.6
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	16.35	17.66	16.71	17.97	18.28	15.20	16.51	15.57	16.82	17.14
	3H	17.07	18.24	17.45	18.57	18.94	21.38	22.55	21.76	22.88	23.25
	4H	17.50	18.59	17.90	18.94	19.33	22.67	23.77	23.07	24.12	24.50
	6H	17.87	18.88	18.28	19.25	19.65	23.30	24.31	23.71	24.68	25.07
	8H	18.00	18.96	18.43	19.35	19.75	23.43	24.39	23.86	24.78	25.19
	12H	18.08	19.00	18.52	19.38	19.81	23.48	24.40	23.92	24.78	25.21
4H	2H	16.78	17.88	17.18	18.23	18.61	15.78	16.87	16.18	17.22	17.61
	3H	17.81	18.72	18.22	19.12	19.52	22.13	23.04	22.54	23.44	23.85
	4H	18.38	19.20	18.81	19.62	20.06	23.59	24.41	24.02	24.83	25.27
	6H	18.87	19.59	19.34	20.03	20.50	24.35	25.06	24.81	25.50	25.97
	8H	19.05	19.72	19.52	20.16	20.63	24.52	25.18	24.99	25.63	26.10
	12H	19.19	19.77	19.67	20.26	20.73	24.60	25.19	25.08	25.67	26.14
8H	4H	19.50	20.17	19.97	20.61	21.08	23.74	24.40	24.20	24.85	25.32
	6H	20.12	20.67	20.62	21.16	21.64	24.63	25.17	25.13	25.67	26.15
	8H	20.36	20.84	20.88	21.36	21.85	24.88	25.36	25.40	25.88	26.37
	12H	20.55	20.98	21.06	21.47	22.04	25.02	25.44	25.53	25.94	26.51
12H	4H	19.67	20.26	20.15	20.74	21.21	23.72	24.31	24.20	24.79	25.26
	6H	20.40	20.88	20.92	21.40	21.89	24.63	25.12	25.15	25.64	26.13
	8H	20.72	21.14	21.23	21.64	22.21	24.94	25.36	25.45	25.86	26.43