

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: P853504

Luminaire Tested: SQ2-BBM-050U-075D-935-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853504
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2104-222-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBM-050U-075D-935-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

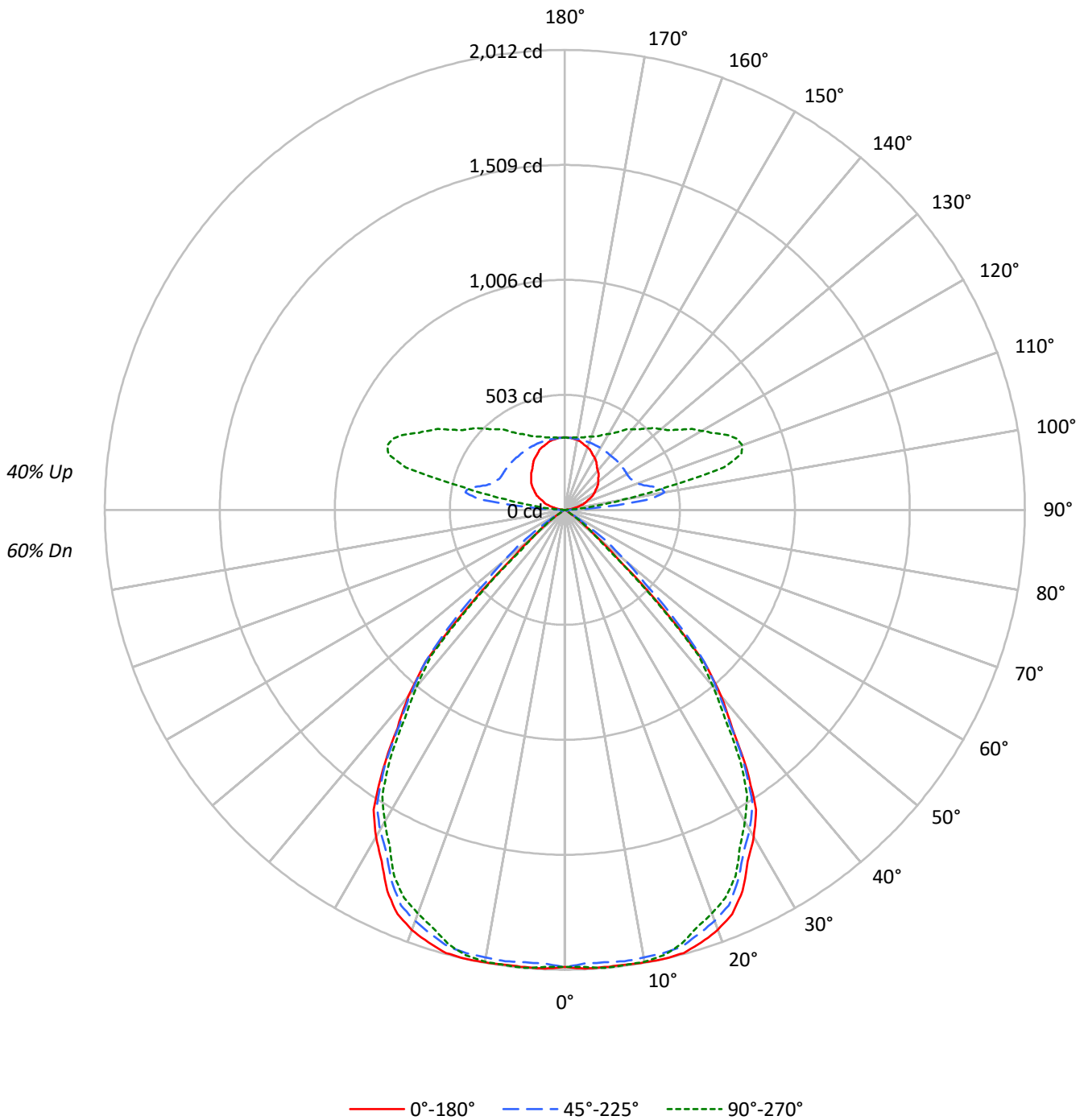
Lumens per Lamp: N/A
Luminaire Lumens: 4955.8 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 42.4
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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	66	66	66	60	
1	102	99	96	93	96	93	90	88	82	80	78	71	70	69	62	61	60	60	60	60	56	
2	95	89	84	80	89	84	80	76	75	71	69	66	63	61	57	56	55	55	55	55	51	
3	89	81	75	70	83	77	71	67	68	64	61	60	58	55	53	51	50	50	50	50	46	
4	83	74	67	62	78	70	64	59	62	58	54	56	52	50	49	47	45	45	45	45	42	
5	77	67	60	55	72	64	58	53	57	53	49	51	48	45	46	43	41	41	41	41	38	
6	72	61	54	49	68	58	52	47	53	48	44	48	44	41	43	40	37	37	37	37	35	
7	67	56	49	44	63	54	47	43	49	44	40	44	40	37	40	37	34	34	34	34	32	
8	63	52	45	40	59	49	43	39	45	40	36	41	37	34	37	34	31	31	31	31	29	
9	59	48	41	36	56	46	40	35	42	37	33	38	34	31	35	31	29	29	29	29	27	
10	55	44	38	33	52	42	36	32	39	34	31	36	31	29	32	29	27	27	27	27	25	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32295	32295	32295
5°	32548	32191	32597
10°	32957	32613	32908
15°	33551	33050	32883
20°	33594	32890	32287
25°	32763	31926	31481
30°	30799	30128	29364
35°	27334	27118	26309
40°	22417	22038	21216
45°	13367	15719	12543
50°	4172	8721	3946
55°	1576	3099	1576
60°	97	872	32
65°	0	38	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15719 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.2	3.9
10°-20°	560.2	11.3
20°-30°	824.1	16.6
30°-40°	842.4	17.0
40°-50°	485.3	9.8
50°-60°	83.6	1.7
60°-70°	3.0	0.1
70°-80°	0.0	0.0
80°-90°	0.5	0.0
90°-100°	126.1	2.5
100°-110°	399.9	8.1
110°-120°	392.1	7.9
120°-130°	319.0	6.4
130°-140°	260.1	5.2
140°-150°	202.8	4.1
150°-160°	146.1	2.9
160°-170°	89.3	1.8
170°-180°	30.1	0.6
0°-30°	1575.6	31.8
0°-40°	2417.9	48.8
0°-60°	2986.9	60.3
0°-90°	2990.4	60.3
90°-120°	918.0	18.5
90°-150°	1700.0	34.3
90°-180°	1966.0	39.7
0°-180°	4955.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2000	2000	2000	2000	2000	
5°	2008	2003	1986	2013	2011	192
15°	2007	2024	1977	1980	1967	565
25°	1839	1856	1792	1774	1767	839
35°	1387	1398	1376	1350	1335	857
45°	585	672	688	650	549	453
55°	56	64	110	62	56	59
65°	0	0	1	0	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	1	3	3	3	1
95°	17	51	229	85	55	20
105°	70	98	394	751	720	73
115°	124	148	318	662	778	123
125°	172	193	314	519	611	153
135°	208	228	312	446	503	161
145°	243	261	312	385	419	152
155°	277	286	312	344	357	128
165°	302	304	314	326	328	85
175°	316	315	316	318	316	30
180°	316	316	316	316	316	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2000.2	2000.2	2000.2	2000.2	2000.2
2.5°	2009.0	2003.5	1987.4	2005.7	2001.8
5°	2008.2	2003.3	1986.2	2013.2	2011.2
7.5°	2007.0	2003.7	1991.6	2013.7	2008.8
10°	2010.2	2009.2	1989.2	2012.1	2007.2
12.5°	2011.8	2017.9	1986.8	2004.8	1996.0
15°	2007.2	2023.8	1977.2	1979.9	1967.2
17.5°	1984.8	2008.3	1946.2	1934.8	1916.8
20°	1955.2	1982.6	1914.2	1894.8	1879.1
22.5°	1913.6	1938.6	1873.3	1849.2	1836.7
25°	1839.1	1855.7	1792.1	1773.9	1767.1
27.5°	1733.6	1738.3	1690.4	1667.8	1659.0
30°	1652.0	1652.0	1616.0	1591.6	1575.0
32.5°	1556.7	1554.4	1528.7	1501.9	1485.3
35°	1386.8	1397.6	1375.8	1349.5	1334.8
37.5°	1202.9	1207.0	1190.5	1162.2	1149.9
40°	1063.6	1064.6	1045.6	1025.2	1006.6
42.5°	901.1	920.9	903.1	871.0	863.3
45°	585.4	672.4	688.4	650.1	549.3
47.5°	294.2	402.6	470.5	365.4	258.8
50°	166.1	230.7	347.2	193.3	157.1
52.5°	110.9	139.4	240.7	126.4	105.9
55°	56.0	63.9	110.1	61.9	56.0
57.5°	19.0	29.6	47.8	30.6	21.0
60°	3.0	12.8	27.0	9.8	1.0
62.5°	0.6	3.3	16.6	2.7	0.2
65°	0.0	0.0	1.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.2	0.6	0.6	0.6
90°	0.0	1.0	3.0	3.0	3.0
92.5°	5.6	22.1	70.7	23.5	16.5
95°	16.9	51.0	228.9	84.9	54.7
97.5°	31.5	66.1	387.8	242.3	148.7
100°	41.8	74.9	441.9	402.9	261.8
102.5°	53.0	84.5	432.4	591.7	452.9
105°	69.7	97.9	394.2	750.8	719.6
107.5°	86.4	112.5	357.7	767.4	809.4
110°	97.5	122.8	339.4	748.3	826.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	108.7	132.4	329.1	715.3	814.2
115°	124.4	147.8	318.5	661.6	778.4
117.5°	139.7	161.9	314.3	609.8	727.6
120°	149.3	170.7	313.5	577.9	691.8
122.5°	158.9	179.5	313.5	552.2	658.3
125°	172.2	192.6	313.5	518.7	611.1
127.5°	183.9	203.6	313.5	492.7	571.5
130°	191.1	211.5	313.5	477.4	548.4
132.5°	198.3	218.7	312.7	465.3	529.3
135°	208.0	228.5	311.5	446.2	502.7
137.5°	217.6	239.0	311.3	428.0	478.4
140°	224.0	245.4	310.5	415.1	460.8
142.5°	231.9	252.5	311.3	402.3	444.9
145°	242.9	261.4	311.5	385.0	419.0
147.5°	253.8	269.6	311.7	369.7	397.5
150°	261.8	274.4	312.5	360.8	383.2
152.5°	268.1	279.2	312.5	353.6	372.1
155°	276.7	286.4	312.5	343.7	357.3
157.5°	285.9	292.5	313.5	337.6	347.0
160°	290.6	296.5	313.5	333.6	341.4
162.5°	295.4	299.7	313.5	330.4	335.8
165°	301.6	304.5	313.5	325.5	328.5
167.5°	307.4	308.1	314.5	322.2	324.7
170°	310.5	310.5	314.5	320.5	321.5
172.5°	312.1	312.9	314.5	318.9	319.1
175°	315.5	314.6	315.5	317.5	316.5
177.5°	316.5	315.7	315.7	317.3	315.7
180°	316.5	316.5	316.5	316.5	316.5

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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	0.81	1.57	1.72	2.46	3.59	0.43	1.19	1.33	2.08	3.21
	3H	0.62	1.29	1.54	2.20	3.35	0.24	0.91	1.15	1.81	2.97
	4H	0.52	1.15	1.45	2.06	3.22	0.13	0.76	1.06	1.67	2.84
	6H	0.41	0.99	1.35	1.90	3.08	0.02	0.60	0.96	1.51	2.69
	8H	0.35	0.90	1.30	1.83	3.00	0.00	0.51	0.91	1.44	2.62
	12H	0.29	0.81	1.24	1.73	2.93	0.00	0.42	0.85	1.35	2.54
4H	2H	0.53	1.15	1.46	2.06	3.23	0.14	0.77	1.07	1.68	2.84
	3H	0.33	0.84	1.27	1.78	2.96	0.00	0.46	0.88	1.40	2.58
	4H	0.22	0.68	1.16	1.62	2.82	0.00	0.30	0.78	1.23	2.44
	6H	0.11	0.50	1.07	1.46	2.67	0.00	0.12	0.68	1.08	2.28
	8H	0.04	0.41	1.00	1.36	2.58	0.00	0.03	0.62	0.98	2.19
	12H	0.00	0.30	0.95	1.27	2.49	0.00	0.00	0.56	0.89	2.11
8H	4H	0.04	0.41	1.00	1.36	2.58	0.00	0.03	0.62	0.98	2.19
	6H	0.00	0.23	0.91	1.22	2.44	0.00	0.00	0.52	0.83	2.05
	8H	0.00	0.13	0.86	1.11	2.35	0.00	0.00	0.47	0.73	1.96
	12H	0.00	0.03	0.79	1.00	2.29	0.00	0.00	0.40	0.62	1.90
12H	4H	0.00	0.30	0.95	1.27	2.49	0.00	0.00	0.56	0.89	2.11
	6H	0.00	0.13	0.86	1.11	2.35	0.00	0.00	0.47	0.73	1.96
	8H	0.00	0.03	0.79	1.00	2.29	0.00	0.00	0.40	0.62	1.90