

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: P855168

Luminaire Tested: SQ2-PH1-050U-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855168
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-050U-100D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

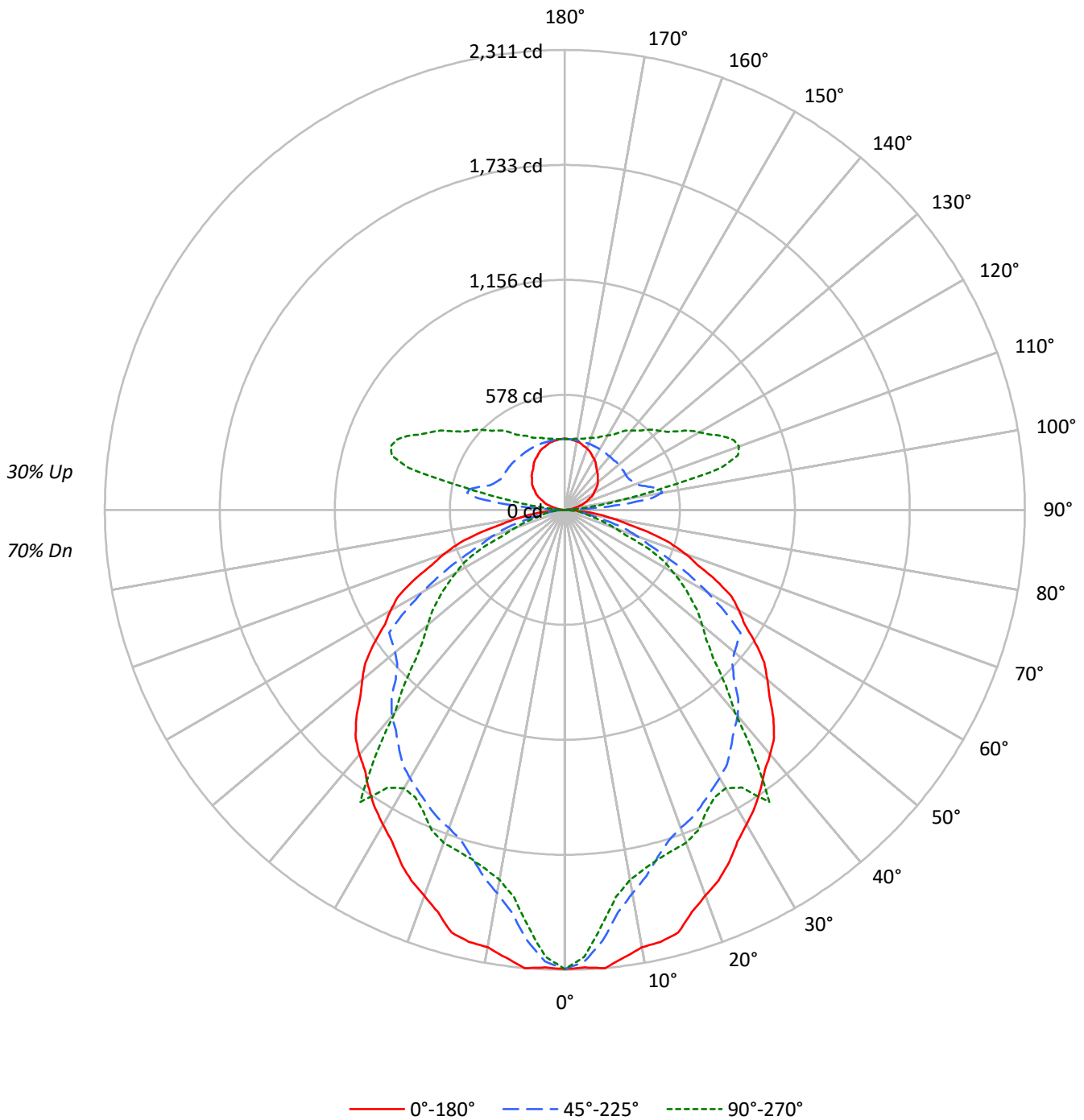
Lumens per Lamp: N/A
Luminaire Lumens: 7317.4 lumens
Efficiency: N/A
Efficacy: 139.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.4
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	74	74	74	70	
1	103	98	94	91	97	93	90	87	83	81	78	74	72	71	66	65	63	63	63	63	59	
2	94	86	80	75	88	82	76	71	73	69	65	66	62	59	59	56	54	54	54	54	50	
3	85	76	68	62	81	72	65	60	65	59	55	58	54	50	52	49	46	46	46	46	43	
4	78	67	59	53	74	64	57	51	58	52	47	52	47	43	47	43	40	40	40	40	37	
5	72	60	52	46	68	57	50	44	52	46	41	47	42	38	42	38	35	35	35	35	32	
6	66	54	46	40	63	52	44	38	47	40	36	42	37	33	38	34	31	31	31	31	28	
7	62	49	41	35	58	47	39	34	42	36	32	39	33	29	35	31	27	27	27	27	25	
8	57	45	37	31	54	43	35	30	39	33	28	35	30	26	32	28	24	24	24	24	22	
9	53	41	33	28	50	39	32	27	36	30	25	33	27	24	30	25	22	22	22	22	20	
10	50	38	30	25	47	36	29	24	33	27	23	30	25	22	27	23	20	20	20	20	18	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37247	37247	37247
5°	37460	35219	34046
10°	36597	32064	30947
15°	36762	30158	30342
20°	35450	29228	30586
25°	34802	29092	29874
30°	34047	29015	30119
35°	33788	28683	35303
40°	33818	28498	27988
45°	33830	27414	24106
50°	33355	27954	22604
55°	32932	30337	21686
60°	32605	26579	20344
65°	32030	21551	17692
70°	30260	18340	12642
75°	26974	13830	9588
80°	22046	8973	8973
85°	13820	8133	6095

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33830 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.0	2.8
10°-20°	533.9	7.3
20°-30°	782.9	10.7
30°-40°	948.1	13.0
40°-50°	932.4	12.7
50°-60°	811.6	11.1
60°-70°	564.3	7.7
70°-80°	267.5	3.7
80°-90°	59.4	0.8
90°-100°	142.0	1.9
100°-110°	450.5	6.2
110°-120°	441.7	6.0
120°-130°	359.4	4.9
130°-140°	293.1	4.0
140°-150°	228.5	3.1
150°-160°	164.6	2.2
160°-170°	100.6	1.4
170°-180°	33.9	0.5
0°-30°	1519.8	20.8
0°-40°	2467.9	33.7
0°-60°	4211.9	57.6
0°-90°	5103.1	69.7
90°-120°	1034.2	14.1
90°-150°	1915.2	26.2
90°-180°	2214.0	30.3
0°-180°	7317.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2307	2307	2307	2307	2307	
5°	2311	2309	2173	2105	2101	217
15°	2199	1959	1804	1792	1815	613
25°	1954	1662	1633	1683	1677	898
35°	1714	1386	1455	1581	1791	1074
45°	1482	1097	1201	1242	1056	1139
55°	1170	854	1078	777	770	1045
65°	838	587	564	463	463	824
75°	432	299	222	158	154	458
85°	75	49	44	35	33	100
90°	0	1	3	3	3	3
95°	19	58	258	96	62	22
105°	78	110	444	846	811	83
115°	140	166	359	745	877	138
125°	194	217	353	584	688	173
135°	234	257	351	503	566	181
145°	274	294	351	434	472	171
155°	312	323	352	387	402	144
165°	340	343	353	367	370	96
175°	356	354	356	358	357	34
180°	357	357	357	357	357	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2306.9	2306.9	2306.9	2306.9	2306.9
2.5°	2301.6	2325.7	2271.7	2250.7	2247.1
5°	2311.3	2309.2	2173.0	2104.9	2100.6
7.5°	2269.1	2202.6	2039.9	1964.8	1961.4
10°	2232.2	2131.4	1955.7	1887.6	1887.6
12.5°	2223.5	2064.3	1887.2	1836.9	1847.2
15°	2199.3	1958.9	1804.2	1791.7	1815.2
17.5°	2119.4	1860.6	1739.7	1768.5	1796.0
20°	2063.2	1807.8	1701.1	1754.3	1780.1
22.5°	2015.8	1757.0	1672.9	1731.2	1745.0
25°	1953.5	1661.6	1633.0	1683.3	1676.9
27.5°	1878.9	1574.1	1593.0	1623.9	1627.8
30°	1826.2	1521.4	1556.3	1587.6	1615.5
32.5°	1775.2	1460.2	1515.9	1590.1	1654.2
35°	1714.2	1385.8	1455.2	1580.7	1791.1
37.5°	1650.2	1298.1	1394.2	1499.8	1566.8
40°	1604.5	1235.3	1352.1	1482.5	1327.9
42.5°	1555.4	1186.2	1288.9	1457.2	1196.3
45°	1481.6	1097.4	1200.6	1242.5	1055.7
47.5°	1394.7	1028.6	1140.9	1036.2	963.2
50°	1327.9	982.4	1112.9	947.1	899.9
52.5°	1262.9	934.6	1093.5	873.8	842.0
55°	1169.9	854.4	1077.7	776.9	770.4
57.5°	1071.1	772.8	953.1	692.6	703.7
60°	1009.7	720.0	823.1	642.8	630.0
62.5°	944.7	668.7	702.0	579.6	566.7
65°	838.4	587.3	564.1	463.1	463.1
67.5°	721.7	502.8	457.0	379.0	327.5
70°	641.0	447.8	388.5	302.2	267.8
72.5°	554.9	389.2	318.2	247.6	208.1
75°	432.4	299.3	221.7	158.0	153.7
77.5°	312.6	215.6	149.3	117.2	117.7
80°	237.1	164.1	96.5	94.4	96.5
82.5°	166.8	112.7	72.0	75.0	75.5
85°	74.6	48.9	43.9	35.1	32.9
87.5°	15.8	14.3	9.5	9.5	9.5
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.2	24.9	79.7	26.5	18.6
95°	19.0	57.5	257.9	95.6	61.7
97.5°	35.4	74.5	436.8	273.0	167.5
100°	47.1	84.4	497.8	453.9	294.9
102.5°	59.6	95.2	487.1	666.5	510.2
105°	78.5	110.3	444.1	845.8	810.7
107.5°	97.3	126.7	403.0	864.5	911.9
110°	109.9	138.4	382.4	843.0	930.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	122.4	149.2	370.7	805.9	917.2
115°	140.2	166.5	358.9	745.3	876.9
117.5°	157.4	182.4	354.1	687.0	819.7
120°	168.2	192.3	353.2	651.0	779.4
122.5°	178.9	202.2	353.2	622.2	741.7
125°	194.0	217.1	353.2	584.4	688.5
127.5°	207.2	229.4	353.2	555.1	643.9
130°	215.2	238.3	353.2	537.8	617.9
132.5°	223.4	246.4	352.3	524.2	596.3
135°	234.4	257.3	350.9	502.7	566.3
137.5°	245.1	269.2	350.7	482.1	538.9
140°	252.2	276.5	349.9	467.6	519.2
142.5°	261.3	284.5	350.7	453.2	501.2
145°	273.6	294.5	350.9	433.7	472.1
147.5°	286.0	303.7	351.2	416.5	447.9
150°	294.9	309.2	352.1	406.5	431.7
152.5°	302.0	314.6	352.1	398.3	419.2
155°	311.8	322.8	352.1	387.3	402.5
157.5°	322.1	329.5	353.2	380.4	390.9
160°	327.4	334.0	353.2	375.8	384.7
162.5°	332.8	337.7	353.2	372.2	378.3
165°	339.7	343.0	353.2	366.8	370.1
167.5°	346.3	347.2	354.3	362.9	365.8
170°	349.9	349.9	354.3	361.1	362.2
172.5°	351.6	352.5	354.3	359.3	359.5
175°	355.5	354.3	355.5	357.7	356.6
177.5°	356.6	355.7	355.7	357.5	355.7
180°	356.6	356.6	356.6	356.6	356.6



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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	21.55	22.61	22.32	23.40	24.36	20.22	21.28	20.99	22.07	23.03
	3H	23.59	24.54	24.37	25.34	26.33	21.27	22.22	22.06	23.02	24.01
	4H	24.33	25.23	25.13	26.04	27.04	21.50	22.39	22.30	23.20	24.20
	6H	24.83	25.65	25.64	26.47	27.48	21.65	22.48	22.46	23.29	24.31
	8H	24.96	25.74	25.78	26.58	27.59	21.69	22.47	22.51	23.31	24.33
	12H	25.01	25.76	25.84	26.59	27.63	21.69	22.44	22.52	23.27	24.31
4H	2H	21.95	22.85	22.75	23.65	24.66	20.89	21.79	21.69	22.59	23.59
	3H	24.08	24.82	24.89	25.66	26.68	22.09	22.83	22.90	23.68	24.69
	4H	24.90	25.58	25.73	26.42	27.46	22.37	23.05	23.20	23.89	24.93
	6H	25.50	26.08	26.34	26.94	27.99	22.59	23.18	23.44	24.04	25.09
	8H	25.67	26.21	26.52	27.08	28.14	22.65	23.20	23.50	24.06	25.12
	12H	25.75	26.24	26.62	27.12	28.19	22.67	23.16	23.54	24.04	25.11
8H	4H	24.93	25.48	25.78	26.34	27.40	22.60	23.15	23.45	24.01	25.07
	6H	25.59	26.04	26.47	26.95	28.01	22.88	23.33	23.76	24.24	25.30
	8H	25.82	26.22	26.71	27.12	28.20	22.99	23.39	23.88	24.28	25.36
	12H	25.94	26.29	26.83	27.18	28.32	23.04	23.39	23.93	24.28	25.41
12H	4H	24.89	25.38	25.76	26.26	27.33	22.61	23.10	23.48	23.98	25.05
	6H	25.57	25.97	26.46	26.86	27.94	22.92	23.32	23.80	24.21	25.29
	8H	25.81	26.16	26.70	27.05	28.18	23.04	23.39	23.93	24.28	25.41