

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: P854961

Luminaire Tested: SQ2-PH1-050U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854961
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-830-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

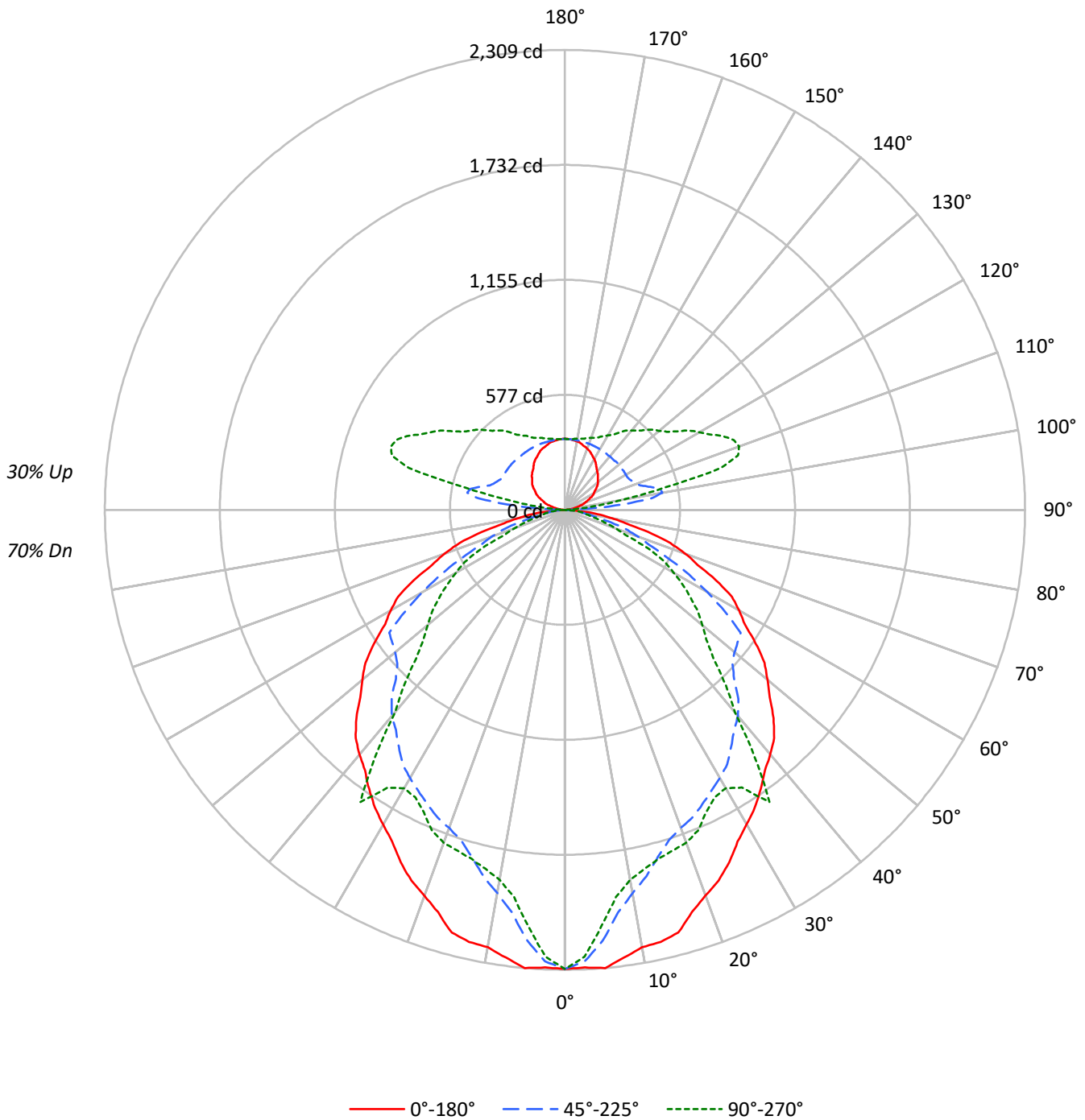
Lumens per Lamp: N/A
Luminaire Lumens: 7310.7 lumens
Efficiency: N/A
Efficacy: 139.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	66	65	63	59	
2	94	86	80	75	88	82	76	71	73	69	65	66	62	59	59	56	54	59	56	54	50	
3	85	76	68	62	81	72	65	60	65	59	55	58	54	50	52	49	46	52	49	46	43	
4	78	67	59	53	74	64	57	51	58	52	47	52	47	43	47	43	40	47	43	40	37	
5	72	60	52	46	68	57	50	44	52	46	41	47	42	38	42	38	35	42	38	35	32	
6	66	54	46	40	63	52	44	38	47	40	36	42	37	33	38	34	31	38	34	31	28	
7	62	49	41	35	58	47	39	34	42	36	32	39	33	29	35	31	27	35	31	27	25	
8	57	45	37	31	54	43	35	30	39	33	28	35	30	26	32	28	24	32	28	24	22	
9	53	41	33	28	50	39	32	27	36	30	25	33	27	24	30	25	22	30	25	22	20	
10	50	38	30	25	47	36	29	24	33	27	23	30	25	22	27	23	20	27	23	20	18	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37213	37213	37213
5°	37426	35188	34015
10°	36564	32036	30919
15°	36729	30131	30315
20°	35419	29203	30558
25°	34769	29065	29847
30°	34015	28989	30091
35°	33758	28657	35272
40°	33786	28473	27963
45°	33798	27389	24085
50°	33325	27929	22584
55°	32904	30308	21667
60°	32576	26553	20324
65°	32004	21532	17677
70°	30232	18321	12628
75°	26949	13818	9576
80°	22027	8963	8963
85°	13801	8133	6095

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.8	2.8
10°-20°	533.4	7.3
20°-30°	782.2	10.7
30°-40°	947.2	13.0
40°-50°	931.5	12.7
50°-60°	810.9	11.1
60°-70°	563.7	7.7
70°-80°	267.3	3.7
80°-90°	59.4	0.8
90°-100°	141.9	1.9
100°-110°	450.1	6.2
110°-120°	441.3	6.0
120°-130°	359.1	4.9
130°-140°	292.8	4.0
140°-150°	228.3	3.1
150°-160°	164.5	2.2
160°-170°	100.5	1.4
170°-180°	33.9	0.5
0°-30°	1518.4	20.8
0°-40°	2465.7	33.7
0°-60°	4208.0	57.6
0°-90°	5098.4	69.7
90°-120°	1033.2	14.1
90°-150°	1913.4	26.2
90°-180°	2212.0	30.3
0°-180°	7310.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2305	2305	2305	2305	2305	
5°	2309	2307	2171	2103	2099	217
15°	2197	1957	1803	1790	1814	613
25°	1952	1660	1632	1682	1675	898
35°	1713	1385	1454	1579	1790	1073
45°	1480	1096	1200	1241	1055	1138
55°	1169	854	1077	776	770	1044
65°	838	587	564	463	463	823
75°	432	299	222	158	154	458
85°	74	49	44	35	33	100
90°	0	1	3	3	3	3
95°	19	57	258	96	62	22
105°	78	110	444	845	810	83
115°	140	166	358	745	876	138
125°	194	217	353	584	688	173
135°	234	257	351	502	566	181
145°	273	294	351	433	472	171
155°	312	322	352	387	402	144
165°	339	343	353	366	370	96
175°	355	354	355	357	356	34
180°	356	356	356	356	356	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2304.8	2304.8	2304.8	2304.8	2304.8
2.5°	2299.5	2323.6	2269.7	2248.6	2245.1
5°	2309.2	2307.1	2171.1	2103.0	2098.7
7.5°	2267.1	2200.6	2038.1	1963.0	1959.6
10°	2230.2	2129.5	1954.0	1885.9	1885.9
12.5°	2221.5	2062.4	1885.5	1835.3	1845.5
15°	2197.3	1957.1	1802.6	1790.0	1813.6
17.5°	2117.5	1858.9	1738.1	1766.9	1794.3
20°	2061.4	1806.2	1699.6	1752.7	1778.5
22.5°	2014.0	1755.4	1671.4	1729.7	1743.5
25°	1951.7	1660.1	1631.5	1681.8	1675.4
27.5°	1877.2	1572.7	1591.6	1622.5	1626.3
30°	1824.5	1520.0	1554.9	1586.2	1614.0
32.5°	1773.6	1458.9	1514.5	1588.7	1652.7
35°	1712.7	1384.6	1453.9	1579.3	1789.5
37.5°	1648.7	1297.0	1393.0	1498.4	1565.4
40°	1603.0	1234.2	1350.9	1481.1	1326.7
42.5°	1554.0	1185.1	1287.7	1455.9	1195.2
45°	1480.2	1096.4	1199.5	1241.3	1054.8
47.5°	1393.4	1027.6	1139.9	1035.2	962.3
50°	1326.7	981.5	1111.9	946.2	899.1
52.5°	1261.8	933.8	1092.5	873.0	841.2
55°	1168.9	853.6	1076.7	776.2	769.7
57.5°	1070.2	772.1	952.2	692.0	703.0
60°	1008.8	719.3	822.3	642.2	629.4
62.5°	943.9	668.1	701.3	579.1	566.2
65°	837.7	586.8	563.6	462.7	462.7
67.5°	721.0	502.3	456.6	378.7	327.2
70°	640.4	447.4	388.1	301.9	267.5
72.5°	554.4	388.8	317.9	247.4	207.9
75°	432.0	299.1	221.5	157.8	153.5
77.5°	312.3	215.4	149.1	117.1	117.6
80°	236.9	163.9	96.4	94.3	96.4
82.5°	166.7	112.6	71.9	75.0	75.4
85°	74.5	48.8	43.9	35.0	32.9
87.5°	15.8	14.2	9.5	9.5	9.5
90°	0.0	1.1	3.4	3.4	3.4
92.5°	6.2	24.9	79.6	26.5	18.5
95°	19.0	57.4	257.7	95.5	61.6
97.5°	35.4	74.4	436.4	272.7	167.3
100°	47.0	84.3	497.4	453.5	294.6
102.5°	59.6	95.1	486.6	665.9	509.7
105°	78.5	110.2	443.7	845.0	810.0
107.5°	97.2	126.6	402.6	863.7	911.1
110°	109.8	138.3	382.0	842.2	929.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	122.3	149.0	370.4	805.1	916.4
115°	140.1	166.3	358.5	744.6	876.1
117.5°	157.3	182.3	353.8	686.4	818.9
120°	168.0	192.1	352.9	650.5	778.7
122.5°	178.8	202.0	352.9	621.6	741.0
125°	193.8	216.9	352.9	583.9	687.9
127.5°	207.0	229.2	352.9	554.6	643.3
130°	215.0	238.1	352.9	537.3	617.3
132.5°	223.2	246.1	352.0	523.7	595.7
135°	234.2	257.1	350.6	502.2	565.8
137.5°	244.9	269.0	350.4	481.7	538.4
140°	252.0	276.2	349.6	467.2	518.7
142.5°	261.1	284.2	350.4	452.8	500.8
145°	273.4	294.2	350.6	433.3	471.7
147.5°	285.7	303.5	350.8	416.1	447.5
150°	294.6	308.9	351.7	406.1	431.3
152.5°	301.8	314.3	351.7	398.0	418.8
155°	311.5	322.5	351.7	386.9	402.2
157.5°	321.8	329.2	352.9	380.0	390.5
160°	327.1	333.7	352.9	375.5	384.3
162.5°	332.5	337.4	352.9	371.9	378.0
165°	339.4	342.7	352.9	366.4	369.7
167.5°	346.0	346.9	354.0	362.6	365.4
170°	349.6	349.6	354.0	360.8	361.9
172.5°	351.3	352.2	354.0	359.0	359.2
175°	355.1	354.0	355.1	357.4	356.3
177.5°	356.3	355.4	355.4	357.2	355.4
180°	356.3	356.3	356.3	356.3	356.3



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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	22.05	23.02	24.01
	4H	24.33	25.22	25.13	26.03	27.03	21.49	22.39	22.29	23.20	24.20
	6H	24.82	25.65	25.64	26.47	27.48	21.65	22.47	22.46	23.29	24.30
	8H	24.95	25.74	25.78	26.58	27.59	21.68	22.47	22.51	23.31	24.32
	12H	25.01	25.76	25.83	26.58	27.63	21.69	22.44	22.52	23.27	24.31
4H	2H	21.95	22.84	22.75	23.65	24.65	20.89	21.78	21.69	22.59	23.59
	3H	24.07	24.82	24.89	25.66	26.68	22.08	22.83	22.90	23.67	24.69
	4H	24.90	25.57	25.73	26.41	27.46	22.37	23.05	23.20	23.89	24.93
	6H	25.49	26.08	26.34	26.94	27.99	22.59	23.17	23.43	24.04	25.09
	8H	25.67	26.21	26.52	27.07	28.13	22.65	23.19	23.50	24.05	25.12
	12H	25.74	26.23	26.61	27.11	28.18	22.67	23.16	23.54	24.04	25.10
8H	4H	24.93	25.47	25.78	26.33	27.40	22.60	23.15	23.45	24.01	25.07
	6H	25.59	26.04	26.47	26.94	28.00	22.88	23.33	23.76	24.23	25.30
	8H	25.82	26.22	26.71	27.11	28.19	22.98	23.38	23.87	24.28	25.36
	12H	25.94	26.29	26.83	27.18	28.31	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	25.56	25.96	26.45	26.86	27.94	22.91	23.31	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