

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: P855320

Luminaire Tested: SQ2-PR1-050U-075D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855320
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-050U-075D-840-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

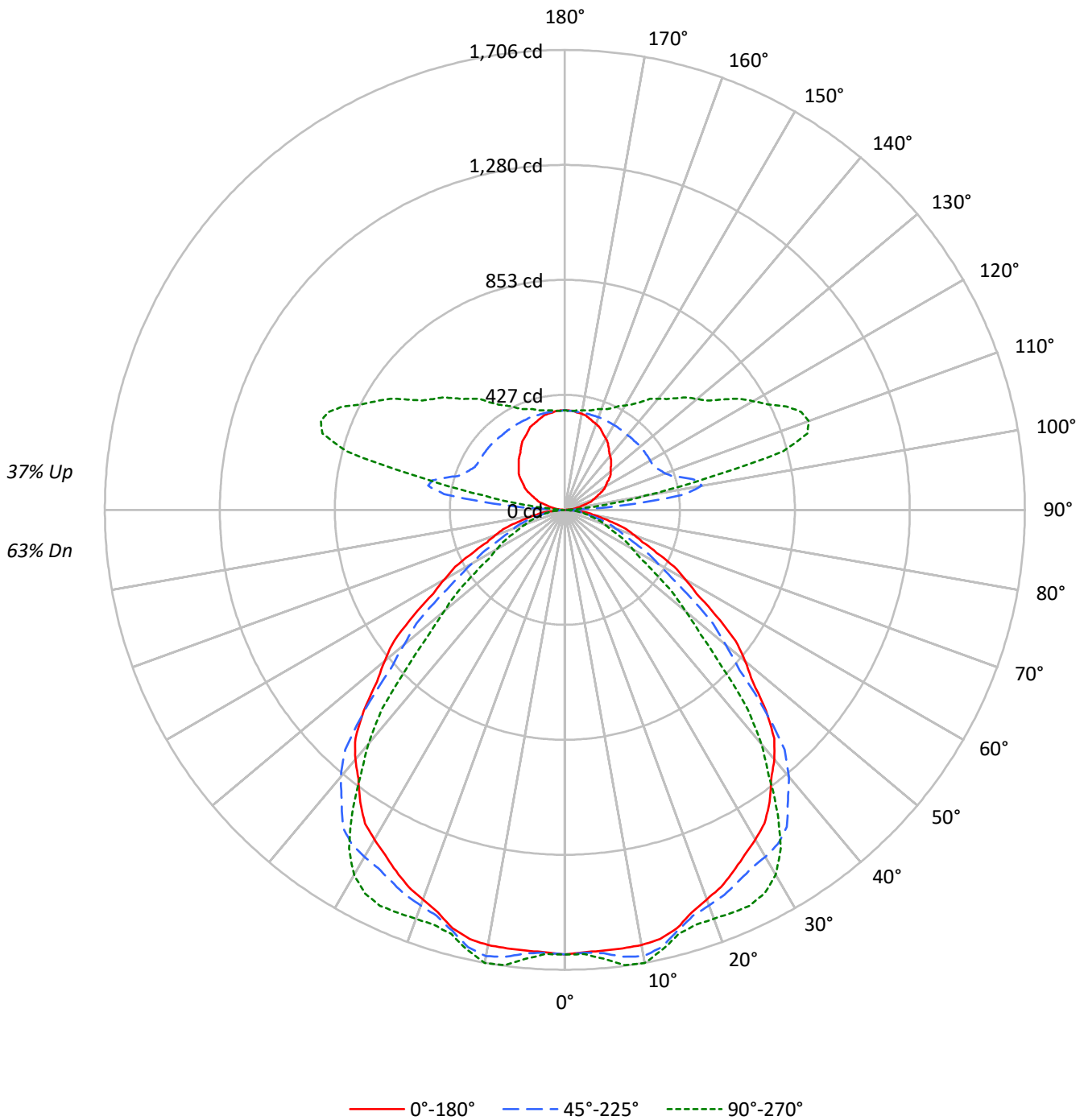
Lumens per Lamp: N/A
Luminaire Lumens: 6258.6 lumens
Efficiency: N/A
Efficacy: 150.8 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 41.5
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

TEST NUMBER: P855320

CATALOG NUMBER: SQ2-PR1-050U-075D-840-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855320

CATALOG NUMBER: SQ2-PR1-050U-075D-840-UNV-STD-W-4

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	104	104	104	104	91	91	91	79	79	79	68	68	68	63				
1	102	98	94	91	95	92	89	86	81	79	76	71	69	68	62	61	59	55				
2	93	86	80	75	87	81	76	72	72	68	64	63	60	58	55	53	51	47				
3	85	76	69	64	80	72	66	61	64	59	55	57	53	50	50	47	44	41				
4	79	68	60	54	74	64	57	52	57	52	48	51	47	43	45	42	39	36				
5	72	61	53	47	68	58	51	45	52	46	42	46	41	38	41	37	34	31				
6	67	55	47	41	63	52	45	40	47	41	37	42	37	33	37	33	30	28				
7	62	50	42	37	58	47	40	35	43	37	32	38	33	30	34	30	27	25				
8	58	45	38	33	54	43	36	31	39	33	29	35	30	27	31	27	25	22				
9	54	42	34	29	51	40	33	28	36	30	26	32	28	24	29	25	22	20				
10	50	38	31	26	47	37	30	25	33	28	24	30	25	22	27	23	20	18				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26629	26629	26629
5°	26595	26757	27084
10°	26873	27563	27976
15°	26865	27005	27231
20°	26431	26837	27732
25°	26357	27104	28871
30°	26329	27706	29149
35°	26079	28300	27139
40°	25478	27248	23882
45°	24106	23914	18886
50°	21916	19552	14654
55°	19260	16090	11406
60°	16669	12868	9394
65°	14384	10663	8222
70°	12935	9446	7298
75°	11853	8178	6712
80°	10312	6564	6564
85°	7466	5910	3112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 26060 cd/sqm



TEST NUMBER: P855320

CATALOG NUMBER: SQ2-PR1-050U-075D-840-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.3	2.5
10°-20°	461.0	7.4
20°-30°	712.7	11.4
30°-40°	857.2	13.7
40°-50°	769.7	12.3
50°-60°	515.6	8.2
60°-70°	299.9	4.8
70°-80°	154.0	2.5
80°-90°	38.5	0.6
90°-100°	146.9	2.3
100°-110°	466.0	7.4
110°-120°	456.9	7.3
120°-130°	371.8	5.9
130°-140°	303.2	4.8
140°-150°	236.4	3.8
150°-160°	170.3	2.7
160°-170°	104.0	1.7
170°-180°	35.1	0.6
0°-30°	1333.0	21.3
0°-40°	2190.2	35.0
0°-60°	3475.5	55.5
0°-90°	3968.0	63.4
90°-120°	1069.8	17.1
90°-150°	1981.2	31.7
90°-180°	2291.0	36.6
0°-180°	6258.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1649	1649	1649	1649	1649	
5°	1641	1669	1651	1655	1671	157
15°	1607	1673	1616	1621	1629	451
25°	1480	1539	1521	1578	1621	682
35°	1323	1335	1436	1408	1377	825
45°	1056	1141	1047	883	827	808
55°	684	710	572	441	405	615
65°	376	385	279	227	215	381
75°	190	185	131	111	108	202
85°	40	32	32	22	17	50
90°	0	1	4	4	4	2
95°	20	59	267	99	64	23
105°	81	114	459	875	839	86
115°	145	172	371	771	907	143
125°	201	224	365	604	712	179
135°	242	266	363	520	586	187
145°	283	305	363	449	488	177
155°	322	334	364	400	416	149
165°	352	355	365	379	383	99
175°	368	367	368	370	369	35
180°	369	369	369	369	369	

TEST NUMBER: P855320

CATALOG NUMBER: SQ2-PR1-050U-075D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1649.3	1649.3	1649.3	1649.3	1649.3
2.5°	1642.5	1662.2	1643.9	1645.3	1649.3
5°	1640.9	1668.7	1650.9	1654.6	1671.1
7.5°	1640.5	1680.3	1671.8	1682.0	1703.7
10°	1639.1	1686.8	1681.2	1683.4	1706.4
12.5°	1631.1	1686.7	1661.0	1658.9	1671.4
15°	1607.2	1672.9	1615.6	1620.8	1629.1
17.5°	1565.1	1633.9	1579.4	1597.9	1614.0
20°	1538.3	1605.7	1561.9	1586.0	1614.0
22.5°	1514.1	1581.4	1545.7	1579.5	1617.9
25°	1479.5	1538.6	1521.4	1578.0	1620.6
27.5°	1443.1	1478.0	1498.2	1574.0	1603.8
30°	1412.2	1435.2	1486.1	1552.0	1563.5
32.5°	1378.6	1392.4	1470.0	1504.3	1489.5
35°	1323.1	1334.6	1435.8	1408.2	1376.9
37.5°	1257.2	1280.9	1358.7	1279.3	1243.4
40°	1208.8	1248.3	1292.8	1174.3	1133.1
42.5°	1149.6	1212.7	1205.4	1054.3	1004.0
45°	1055.7	1141.3	1047.3	883.0	827.1
47.5°	945.1	1032.9	879.3	732.5	680.2
50°	872.5	943.3	778.4	640.9	583.4
52.5°	798.5	849.6	692.4	555.0	502.6
55°	684.2	710.5	571.6	441.3	405.2
57.5°	579.3	596.1	467.0	356.5	329.8
60°	516.2	527.6	398.5	312.2	290.9
62.5°	458.2	467.2	343.3	274.7	258.6
65°	376.5	384.8	279.1	226.7	215.2
67.5°	311.7	315.9	229.7	188.3	177.5
70°	274.0	275.7	200.1	162.9	154.6
72.5°	240.4	238.1	171.8	141.5	135.9
75°	190.0	185.1	131.1	110.8	107.6
77.5°	141.9	136.6	92.2	85.4	85.4
80°	110.9	104.4	70.6	70.6	70.6
82.5°	82.7	73.5	54.4	54.4	53.1
85°	40.3	32.2	31.9	21.8	16.8
87.5°	10.7	11.0	4.8	4.8	4.8
90°	0.0	1.2	3.5	3.5	3.5
92.5°	6.5	25.8	82.4	27.4	19.2
95°	19.7	59.4	266.8	98.9	63.7
97.5°	36.7	77.0	451.9	282.4	173.3
100°	48.7	87.3	515.0	469.5	305.1
102.5°	61.8	98.5	503.9	689.6	527.8
105°	81.2	114.1	459.4	875.0	838.6
107.5°	100.7	131.1	416.9	894.3	943.3
110°	113.6	143.1	395.5	872.1	962.7



TEST NUMBER: P855320

CATALOG NUMBER: SQ2-PR1-050U-075D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	126.7	154.3	383.5	833.6	948.9
115°	145.0	172.2	371.2	771.0	907.1
117.5°	162.8	188.7	366.3	710.7	847.9
120°	174.0	198.9	365.4	673.5	806.2
122.5°	185.2	209.2	365.4	643.5	767.2
125°	200.7	224.5	365.4	604.5	712.2
127.5°	214.3	237.3	365.4	574.2	666.0
130°	222.7	246.5	365.4	556.4	639.1
132.5°	231.1	254.9	364.4	542.3	616.8
135°	242.4	266.3	363.0	520.0	585.8
137.5°	253.6	278.5	362.8	498.8	557.5
140°	261.0	286.0	361.9	483.8	537.0
142.5°	270.3	294.3	362.8	468.8	518.5
145°	283.1	304.6	363.0	448.7	488.3
147.5°	295.8	314.2	363.3	430.8	463.2
150°	305.1	319.8	364.2	420.5	446.6
152.5°	312.4	325.4	364.2	412.1	433.6
155°	322.5	333.8	364.2	400.5	416.4
157.5°	333.2	340.9	365.4	393.4	404.4
160°	338.7	345.5	365.4	388.8	397.9
162.5°	344.3	349.3	365.4	385.0	391.3
165°	351.5	354.9	365.4	379.3	382.8
167.5°	358.2	359.1	366.5	375.5	378.4
170°	361.9	361.9	366.5	373.5	374.7
172.5°	363.7	364.7	366.5	371.6	371.9
175°	367.7	366.6	367.7	370.0	368.8
177.5°	368.8	367.9	367.9	369.8	367.9
180°	368.8	368.8	368.8	368.8	368.8



TEST NUMBER: P855320

CATALOG NUMBER: SQ2-PR1-050U-075D-840-UNV-STD-W-4

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	19.35	20.29	20.20	21.15	22.22	16.08	17.02	16.92	17.88	18.95
	3H	20.59	21.43	21.45	22.30	23.40	17.15	17.99	18.01	18.86	19.96
	4H	21.05	21.84	21.92	22.71	23.82	17.55	18.34	18.43	19.22	20.33
	6H	21.37	22.10	22.25	22.98	24.10	17.89	18.62	18.77	19.50	20.62
	8H	21.45	22.15	22.35	23.05	24.17	17.98	18.67	18.87	19.57	20.69
	12H	21.49	22.14	22.38	23.04	24.18	17.99	18.65	18.89	19.54	20.68
4H	2H	19.44	20.23	20.32	21.11	22.22	16.66	17.45	17.53	18.32	19.43
	3H	20.92	21.58	21.81	22.48	23.61	17.93	18.59	18.82	19.49	20.62
	4H	21.52	22.11	22.42	23.02	24.17	18.44	19.04	19.34	19.94	21.09
	6H	21.98	22.49	22.89	23.41	24.57	18.88	19.39	19.79	20.32	21.47
	8H	22.11	22.59	23.03	23.51	24.67	19.00	19.48	19.92	20.40	21.57
	12H	22.17	22.60	23.10	23.54	24.71	19.03	19.46	19.96	20.40	21.57
8H	4H	21.55	22.03	22.47	22.95	24.11	18.75	19.23	19.67	20.15	21.31
	6H	22.10	22.50	23.05	23.46	24.62	19.29	19.68	20.23	20.65	21.81
	8H	22.30	22.65	23.25	23.60	24.79	19.47	19.82	20.43	20.78	21.96
	12H	22.41	22.72	23.36	23.66	24.89	19.54	19.85	20.49	20.80	22.03
12H	4H	21.51	21.94	22.45	22.88	24.05	18.77	19.20	19.71	20.14	21.31
	6H	22.09	22.44	23.04	23.39	24.57	19.35	19.70	20.30	20.65	21.83
	8H	22.30	22.61	23.26	23.56	24.79	19.56	19.87	20.51	20.81	22.05