

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P646329

Luminaire Tested: **FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W**

Issue Date: 12/13/2022

Test Information

Test Method: LM-79-08
Report Number: P646329
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209151)
Test Lab: INNOVATION CENTER
Issue Date: 12/13/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W
Description: 4 INCH 6000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQ TRIM WITH LI FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

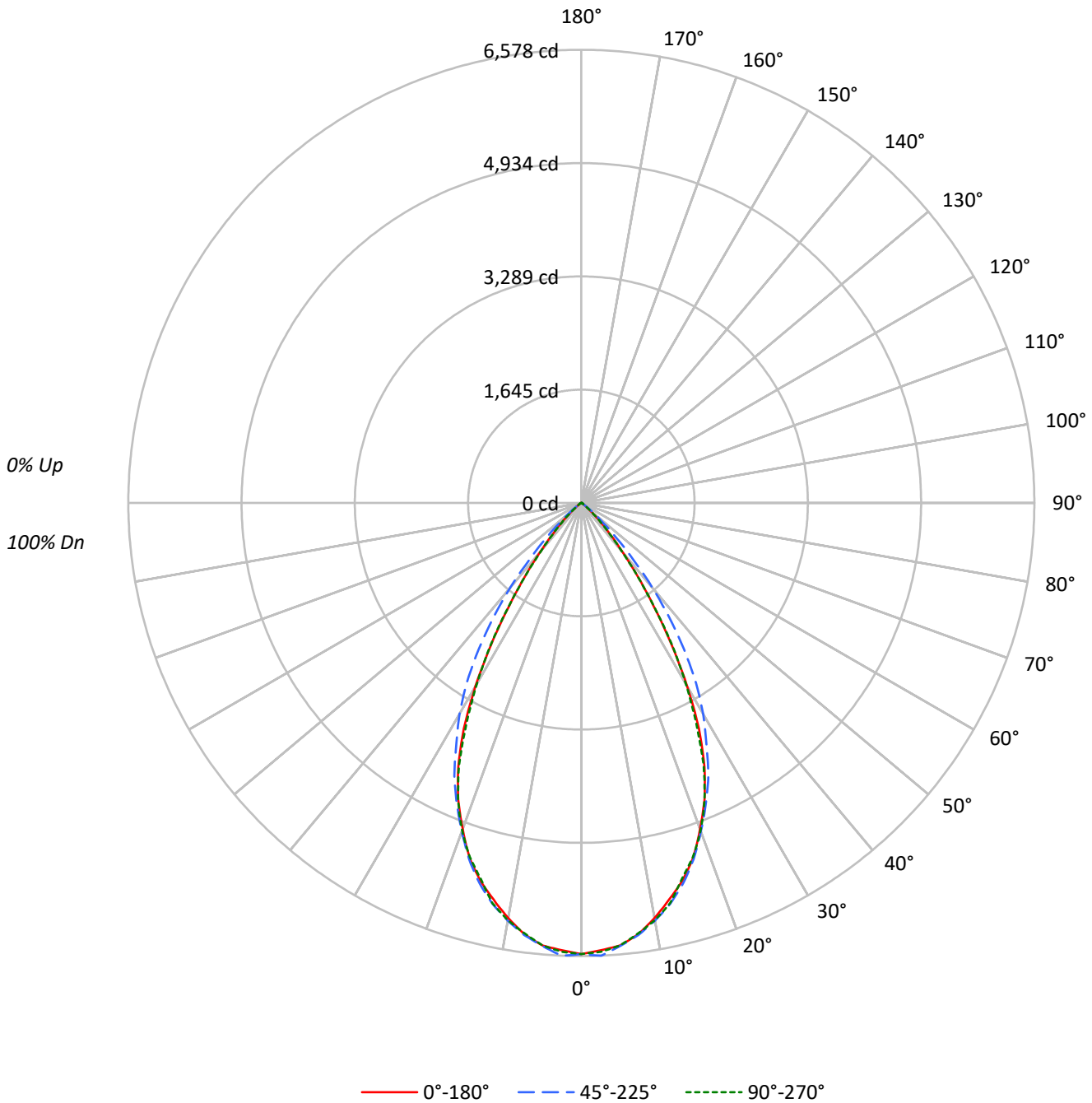
Lumens per Lamp: N/A
Luminaire Lumens: 6046.0 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 72
Input Voltage (V):
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: 25 FT



TEST NUMBER: P646329
CATALOG NUMBER: FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W

Luminous Intensity Polar Plot





TEST NUMBER: P646329

CATALOG NUMBER: FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	631886	631886	631886
5°	624624	625428	624624
10°	599641	603315	602502
15°	566891	571046	563974
20°	517360	521200	519927
25°	450491	464661	447382
30°	342559	394011	337478
35°	215629	306304	217596
40°	116334	202287	114243
45°	55074	99927	54487
50°	20625	37467	20625
55°	9791	11910	9118
60°	6426	5635	6426
65°	3790	3790	3790
70°	2342	3555	2342
75°	1566	1566	1566
80°	2334	2334	2334
85°	0	0	0



TEST NUMBER: P646329

CATALOG NUMBER: FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	607.2	10.0
10°-20°	1591.3	26.3
20°-30°	1943.9	32.2
30°-40°	1359.6	22.5
40°-50°	445.6	7.4
50°-60°	70.8	1.2
60°-70°	19.4	0.3
70°-80°	6.5	0.1
80°-90°	1.8	0.0
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°	4142.4	68.5
0°-40°	5502.0	91.0
0°-60°	6018.4	99.5
0°-90°	6046.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6046.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6549	6549	6549	6549	6549	
5°	6449	6451	6457	6418	6449	605
15°	5675	5698	5717	5679	5646	1583
25°	4231	4296	4364	4285	4202	1901
35°	1831	2161	2600	2128	1847	1168
45°	404	497	732	491	399	339
55°	58	62	71	62	54	58
65°	17	21	17	21	17	18
75°	4	4	4	4	4	6
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P646329
 CATALOG NUMBER: FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8
2.5°	6498.8	6544.7	6532.1	6561.3	6561.3	6528.0	6536.4	6548.8	6565.4	6578.0	6478.0
5°	6448.9	6490.5	6453.0	6494.6	6469.6	6432.3	6494.6	6461.3	6482.2	6457.2	6473.9
7.5°	6315.8	6382.4	6307.5	6357.4	6340.8	6319.9	6344.8	6336.5	6349.1	6328.2	6282.5
10°	6120.2	6174.4	6124.5	6195.1	6161.8	6141.1	6161.8	6182.7	6178.5	6157.7	6182.7
12.5°	5895.6	5957.9	5933.0	5974.6	5937.2	5937.2	5987.1	5974.6	5978.8	5962.2	5991.2
15°	5675.0	5720.9	5683.4	5737.5	5720.9	5675.0	5695.8	5695.8	5729.2	5716.6	5683.4
17.5°	5400.5	5437.9	5396.3	5408.8	5392.2	5383.9	5471.1	5412.9	5446.2	5421.2	5425.5
20°	5038.5	5055.2	5042.6	5075.9	5055.2	5080.1	5071.8	5063.5	5063.5	5075.9	5046.8
22.5°	4672.3	4672.3	4684.9	4693.2	4709.8	4684.9	4734.8	4693.2	4697.3	4726.5	4718.1
25°	4231.4	4218.8	4248.0	4289.6	4306.2	4285.4	4351.9	4318.6	4343.6	4364.5	4318.6
27.5°	3694.7	3694.7	3723.7	3794.5	3806.9	3831.9	3923.4	3923.4	3956.7	3927.6	3960.9
30°	3074.6	3120.5	3157.8	3249.3	3278.5	3332.7	3428.3	3474.1	3549.0	3536.4	3519.8
32.5°	2438.1	2500.6	2504.7	2600.4	2679.4	2770.9	2899.9	3008.1	3062.2	3099.6	3058.0
35°	1830.6	1868.1	1901.4	1968.0	2101.1	2221.8	2338.3	2479.7	2575.5	2600.4	2562.9
37.5°	1339.8	1348.1	1381.4	1443.7	1543.5	1660.2	1801.6	1955.4	2055.4	2092.8	2051.2
40°	923.6	931.9	948.6	1002.7	1085.9	1169.1	1281.5	1439.6	1531.1	1606.0	1551.8
42.5°	619.9	628.2	644.8	686.4	732.3	811.2	898.7	998.5	1085.9	1119.2	1090.0
45°	403.6	403.6	411.9	441.1	466.1	528.4	590.8	653.2	711.4	732.3	711.4
47.5°	237.2	241.3	249.6	270.5	299.5	324.5	370.3	411.9	428.5	445.2	436.9
50°	137.4	137.4	149.8	162.3	183.0	199.7	216.3	232.9	241.3	249.6	241.3
52.5°	74.9	79.1	83.2	87.4	95.8	112.4	124.8	124.8	129.0	133.1	129.0
55°	58.2	58.2	58.2	58.2	62.5	62.5	62.5	66.6	66.6	70.8	66.6
57.5°	41.6	41.6	41.6	45.8	45.8	45.8	41.6	41.6	41.6	41.6	41.6
60°	33.3	33.3	33.3	33.3	33.3	33.3	33.3	29.2	29.2	29.2	29.2
62.5°	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
65°	16.6	16.6	20.9	20.9	20.9	20.9	20.9	16.6	16.6	16.6	16.6
67.5°	12.6	12.6	12.6	12.6	16.6	16.6	12.6	12.6	12.6	12.6	12.6
70°	8.3	8.3	8.3	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
72.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
75°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
77.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
80°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P646329
 CATALOG NUMBER: FLDSQ4C60D010 FEU4C609030 F4LC-SQ-LI-D2W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8	6548.8
2.5°	6548.8	6478.0	6486.3	6523.8	6502.9	6523.8	6519.7	6519.7
5°	6478.0	6457.2	6424.0	6411.4	6436.4	6490.5	6482.2	6448.9
7.5°	6344.8	6290.9	6328.2	6344.8	6324.1	6357.4	6374.0	6303.3
10°	6186.8	6166.1	6157.7	6166.1	6157.7	6191.0	6149.4	6149.4
12.5°	5962.2	5928.9	5928.9	5978.8	5949.6	5924.6	5957.9	5953.8
15°	5737.5	5670.8	5670.8	5687.4	5700.0	5683.4	5687.4	5645.8
17.5°	5404.6	5383.9	5354.7	5400.5	5412.9	5396.3	5408.8	5387.9
20°	5092.5	5092.5	5038.5	5059.2	5075.9	5088.4	5096.8	5063.5
22.5°	4693.2	4701.5	4664.0	4705.6	4718.1	4676.5	4684.9	4676.5
25°	4327.0	4322.9	4293.7	4277.0	4285.4	4268.7	4264.6	4202.2
27.5°	3923.4	3881.8	3819.5	3836.1	3765.3	3707.1	3707.1	3611.3
30°	3486.5	3415.9	3332.7	3249.3	3187.0	3120.5	3082.9	3029.0
32.5°	2974.8	2879.2	2775.1	2662.7	2592.1	2492.3	2438.1	2467.3
35°	2467.3	2325.7	2184.3	2072.0	1963.7	1905.5	1838.9	1847.3
37.5°	1976.3	1776.6	1651.8	1531.1	1439.6	1364.7	1335.5	1327.2
40°	1443.7	1285.6	1160.8	1073.4	1011.1	952.8	919.6	907.0
42.5°	998.5	886.3	786.3	715.6	674.0	636.5	619.9	615.8
45°	649.1	582.5	516.0	466.1	432.8	407.8	403.6	399.3
47.5°	407.8	374.4	332.8	295.4	266.2	249.6	237.2	237.2
50°	232.9	220.5	199.7	179.0	162.3	154.0	141.4	137.4
52.5°	124.8	124.8	116.5	99.8	87.4	79.1	79.1	74.9
55°	66.6	66.6	62.5	62.5	58.2	58.2	58.2	54.2
57.5°	41.6	41.6	45.8	45.8	41.6	41.6	41.6	41.6
60°	29.2	33.3	33.3	33.3	33.3	33.3	33.3	33.3
62.5°	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
65°	16.6	20.9	20.9	20.9	20.9	16.6	16.6	16.6
67.5°	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
70°	12.6	12.6	12.6	12.6	12.6	8.3	8.3	8.3
72.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
75°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
77.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
80°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)