

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: P#

Luminaire Tested: **FLDSQ4C60D010 FEU4C609030 F4LC-SQ-WLI**

Issue Date: 12/13/2022

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P#
 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-WLI
 Description: 4 INCH 6000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

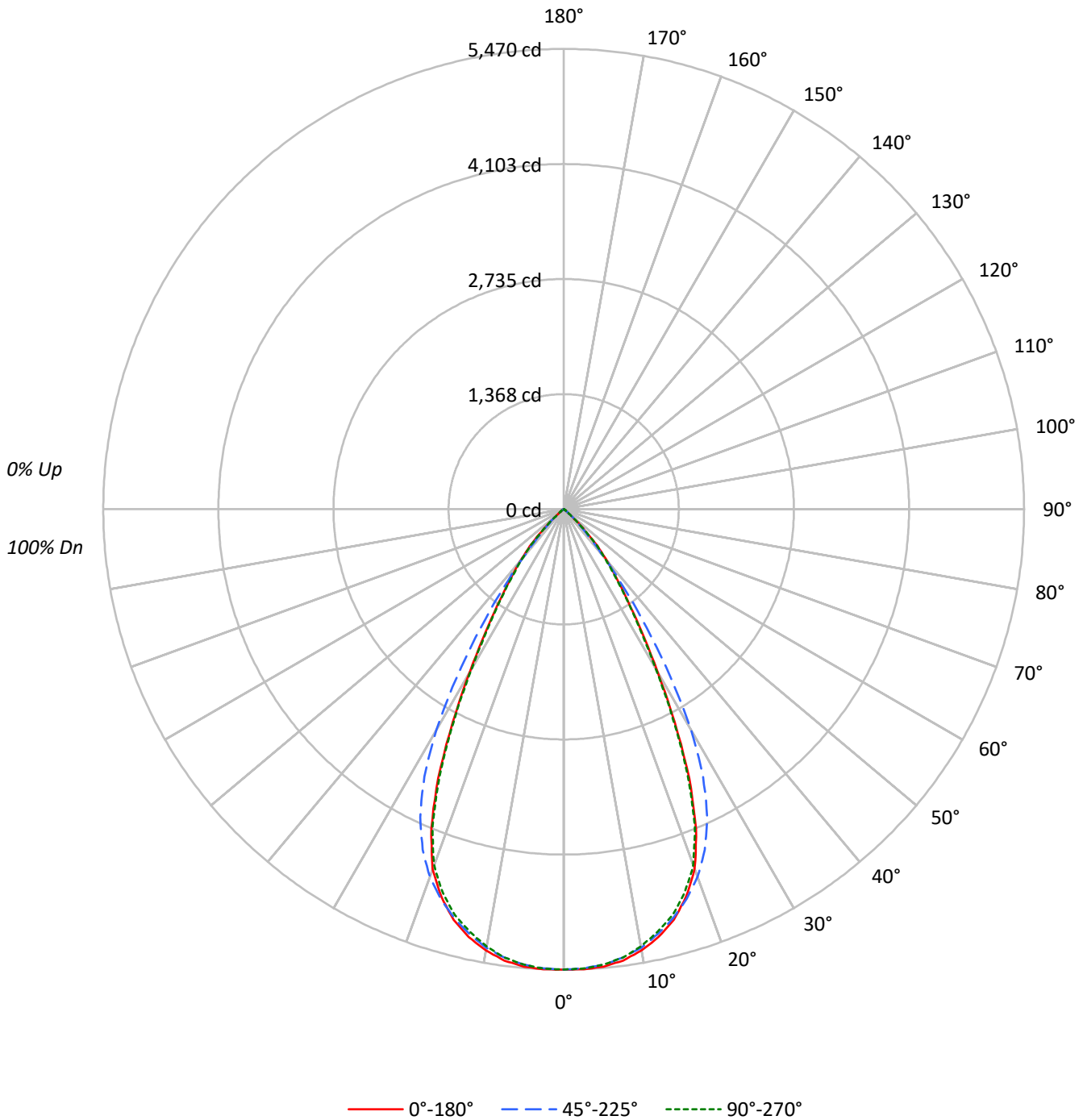
Lumens per Lamp: N/A
 Luminaire Lumens: 4896.0 lumens
 Efficiency: N/A
 Efficacy: 68.0 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	GONIO 1 IN0055	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94	94	94	94	
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	
5	93	84	79	74	91	84	78	74	82	77	73	80	76	73	79	75	72	71	71	71	71	
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	71	68	66	66	66	66	
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	59	58	58	58	58	
9	76	66	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	
10	72	63	57	53	71	62	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	527688	527688	527688
5°	528241	525810	525810
10°	521308	518232	516625
15°	504388	502001	498614
20°	467128	477314	461963
25°	375593	429358	370643
30°	247900	336643	242017
35°	154943	202153	152127
40°	101119	93687	97163
45°	48687	37375	45945
50°	12264	14906	11498
55°	6763	6123	6544
60°	4612	3879	4361
65°	3151	2877	3151
70°	2483	2116	2483
75°	1864	1864	1864
80°	1389	2111	2111
85°	1439	2768	2768

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.3	10.5
10°-20°	1404.5	28.7
20°-30°	1673.8	34.2
30°-40°	947.8	19.4
40°-50°	293.0	6.0
50°-60°	40.7	0.8
60°-70°	13.9	0.3
70°-80°	5.5	0.1
80°-90°	2.3	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°	3592.7	73.4
0°-40°	4540.5	92.7
0°-60°	4874.3	99.6
0°-90°	4896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5469	5469	5469	5469	5469	
5°	5454	5441	5429	5425	5429	516
15°	5049	5040	5025	5005	4992	1408
25°	3528	3734	4033	3740	3481	1573
35°	1315	1435	1716	1438	1292	856
45°	357	416	274	404	337	295
55°	40	40	36	39	39	40
65°	14	14	13	14	14	15
75°	5	5	5	5	5	5
85°	1	2	2	2	2	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5468.9	5468.9	5468.9	5468.9	5468.9
2.5°	5470.2	5461.4	5458.9	5456.4	5461.4
5°	5453.8	5441.3	5428.7	5424.9	5428.7
7.5°	5407.4	5394.8	5373.4	5368.4	5372.2
10°	5320.7	5309.4	5289.3	5278.0	5272.9
12.5°	5206.3	5187.5	5168.7	5156.1	5143.5
15°	5049.3	5040.5	5025.4	5005.3	4991.5
17.5°	4831.9	4844.5	4853.3	4813.1	4776.7
20°	4549.3	4595.8	4648.5	4566.9	4499.0
22.5°	4108.3	4241.5	4375.9	4221.4	4070.6
25°	3527.9	3733.9	4032.9	3740.2	3481.4
27.5°	2850.7	3112.0	3583.1	3113.3	2813.0
30°	2225.0	2493.9	3021.5	2458.7	2172.2
32.5°	1708.6	1909.7	2360.7	1879.5	1672.2
35°	1315.4	1434.8	1716.2	1438.5	1291.5
37.5°	1022.7	1083.0	1154.6	1061.6	992.5
40°	802.8	805.3	743.8	792.8	771.4
42.5°	595.5	593.0	457.3	577.9	581.7
45°	356.8	415.9	273.9	404.5	336.7
47.5°	169.6	234.9	164.6	222.4	157.0
50°	81.7	113.1	99.3	105.5	76.6
52.5°	55.3	57.8	56.5	55.3	52.8
55°	40.2	40.2	36.4	38.9	38.9
57.5°	30.2	30.2	26.4	28.9	28.9
60°	23.9	22.6	20.1	22.6	22.6
62.5°	17.6	17.6	15.1	17.6	17.6
65°	13.8	13.8	12.6	13.8	13.8
67.5°	11.3	11.3	8.8	11.3	10.1
70°	8.8	8.8	7.5	8.8	8.8
72.5°	6.3	6.3	6.3	6.3	6.3
75°	5.0	5.0	5.0	5.0	5.0
77.5°	3.8	3.8	3.8	3.8	3.8
80°	2.5	2.5	3.8	3.8	3.8
82.5°	2.5	2.5	2.5	2.5	2.5
85°	1.3	2.5	2.5	2.5	2.5
87.5°	1.3	1.3	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)