

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 FEU4C609035 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 FEU4C609035 F4LC-SQ-WLI
 Description: 4 INCH 6000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

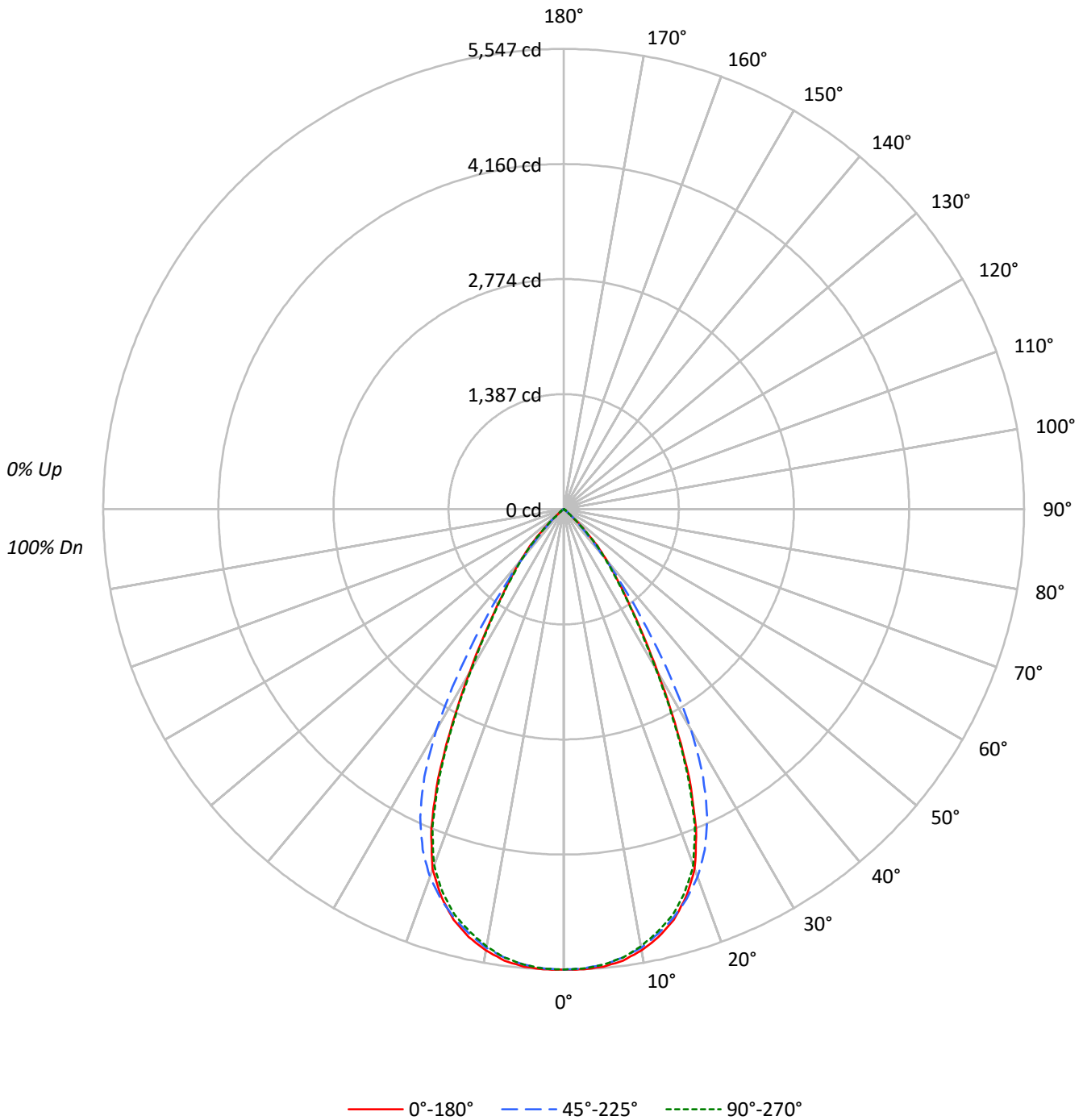
Lumens per Lamp: N/A
 Luminaire Lumens: 4964.9 lumens
 Efficiency: N/A
 Efficacy: 69.0 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	114	111	108	106	111	109	106	104	105	103	101		101	100	98		97	96	95	94
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93	91	89	87
3	103	96	91	88	101	95	90	87	92	89	85		90	87	84		88	85	83	81
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		83	80	77	76
5	93	84	79	74	91	84	78	74	82	77	73		80	76	73		79	75	72	71
6	88	79	73	69	87	79	73	69	77	72	68		76	71	68		74	71	68	66
7	84	75	69	65	82	74	68	64	73	68	64		71	67	64		70	66	63	62
8	80	70	64	60	79	70	64	60	69	64	60		68	63	60		67	63	59	58
9	76	66	61	57	75	66	60	57	65	60	56		64	60	56		63	59	56	55
10	72	63	57	53	71	62	57	53	62	57	53		61	56	53		60	56	53	52

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	535127	535127	535127
5°	535690	533220	533220
10°	528657	525531	523905
15°	511500	509083	505647
20°	473710	484040	468473
25°	380885	435405	375859
30°	251399	341389	245438
35°	157122	205004	154271
40°	102542	94997	98536
45°	49370	37894	46586
50°	12429	15116	11664
55°	6864	6207	6645
60°	4670	3937	4419
65°	3196	2900	3196
70°	2511	2144	2511
75°	1901	1901	1901
80°	1389	2111	2111
85°	1439	2768	2768

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	521.6	10.5
10°-20°	1424.3	28.7
20°-30°	1697.4	34.2
30°-40°	961.2	19.4
40°-50°	297.1	6.0
50°-60°	41.3	0.8
60°-70°	14.1	0.3
70°-80°	5.6	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°	3643.3	73.4
0°-40°	4604.5	92.7
0°-60°	4943.0	99.6
0°-90°	4964.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4964.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5546	5546	5546	5546	5546	
5°	5531	5518	5505	5501	5505	524
15°	5120	5112	5096	5076	5062	1428
25°	3578	3786	4090	3793	3530	1595
35°	1334	1455	1740	1459	1310	868
45°	362	422	278	410	341	299
55°	41	41	37	40	40	40
65°	14	14	13	14	14	15
75°	5	5	5	5	5	6
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°	5546.0	5546.0	5546.0	5546.0	5546.0
2.5°	5547.3	5538.4	5535.8	5533.3	5538.4
5°	5530.7	5518.0	5505.2	5501.4	5505.2
7.5°	5483.6	5470.8	5449.2	5444.1	5447.9
10°	5395.7	5384.2	5363.8	5352.3	5347.2
12.5°	5279.7	5260.6	5241.5	5228.8	5216.0
15°	5120.5	5111.5	5096.3	5075.9	5061.9
17.5°	4900.0	4912.8	4921.7	4880.9	4844.0
20°	4613.4	4660.5	4714.0	4631.2	4562.4
22.5°	4166.2	4301.2	4437.6	4280.9	4128.0
25°	3577.6	3786.5	4089.7	3792.9	3530.4
27.5°	2890.8	3155.9	3633.6	3157.1	2852.6
30°	2256.4	2529.0	3064.1	2493.3	2202.9
32.5°	1732.7	1936.6	2394.0	1906.0	1695.8
35°	1333.9	1455.0	1740.4	1458.8	1309.7
37.5°	1037.1	1098.2	1170.9	1076.6	1006.5
40°	814.1	816.7	754.2	803.9	782.3
42.5°	603.9	601.4	463.8	586.1	589.9
45°	361.8	421.7	277.7	410.2	341.4
47.5°	172.0	238.2	166.9	225.5	159.3
50°	82.8	114.7	100.7	107.0	77.7
52.5°	56.1	58.6	57.3	56.1	53.5
55°	40.8	40.8	36.9	39.5	39.5
57.5°	30.6	30.6	26.8	29.3	29.3
60°	24.2	22.9	20.4	22.9	22.9
62.5°	17.8	17.8	15.3	17.8	17.8
65°	14.0	14.0	12.7	14.0	14.0
67.5°	11.5	11.5	8.9	11.5	10.2
70°	8.9	8.9	7.6	8.9	8.9
72.5°	6.4	6.4	6.4	6.4	6.4
75°	5.1	5.1	5.1	5.1	5.1
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)