

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: **FLDSQ4C05D010 FEU4C059030 F4LC-SQ-WH**

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: FLDSQ4C05D010 FEU4C059030 F4LC-SQ-WH
 Description: 4 INCH 500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

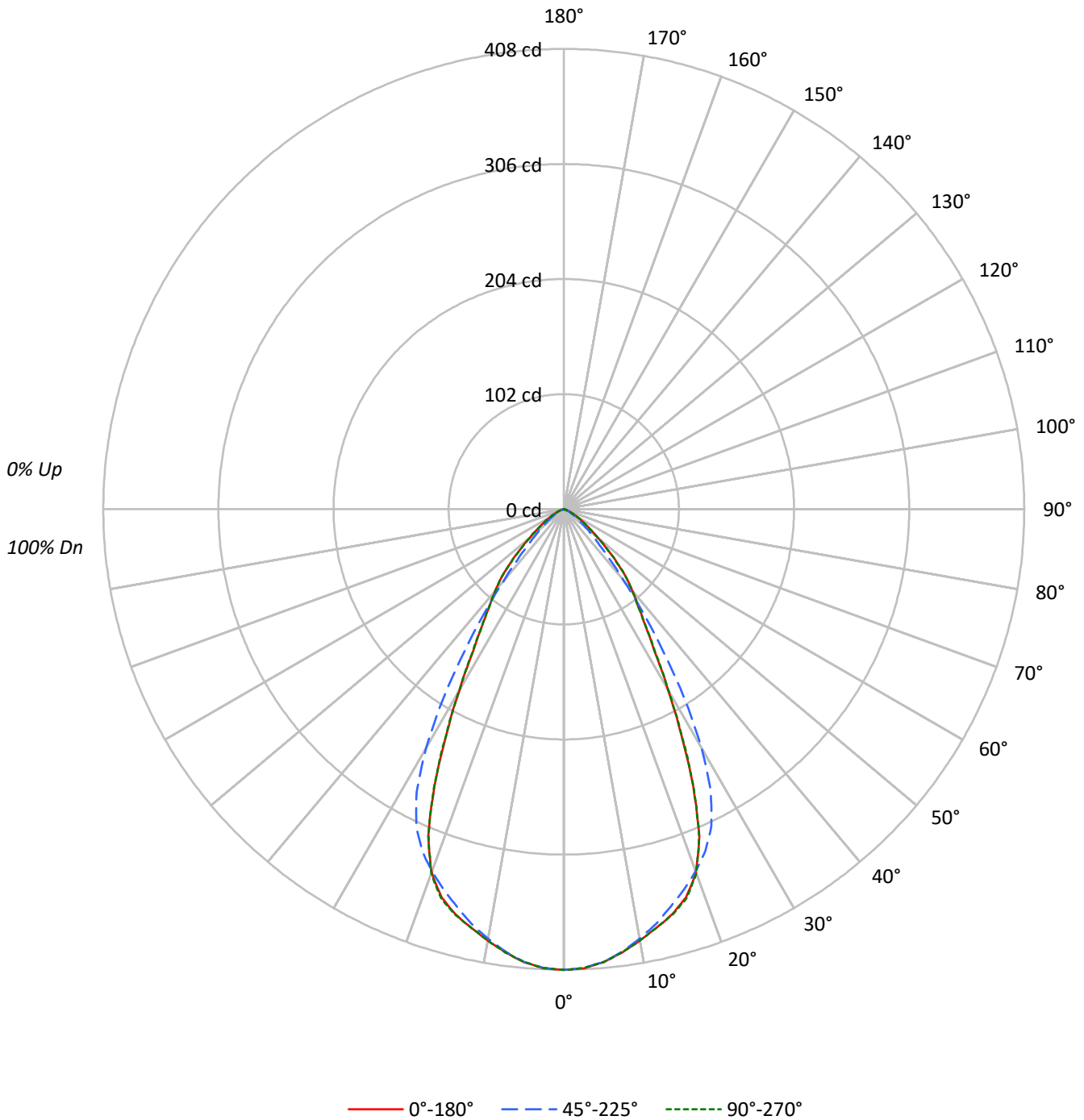
Lumens per Lamp: N/A
 Luminaire Lumens: 432.0 lumens
 Efficiency: N/A
 Efficacy: 60.0 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 7.2
 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				
RC	80					70					50					30				
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	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92		
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84		
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77		
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71		
5	89	80	74	69	88	79	73	69	78	72	68	76	71	68	74	70	67	66		
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61		
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56		
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52		
9	72	61	55	51	71	61	55	51	60	54	51	59	54	50	58	54	50	49		
10	68	58	52	48	67	57	51	47	57	51	47	56	51	47	55	50	47	46		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39387	39387	39387
5°	39024	38995	39014
10°	38025	37868	38025
15°	37110	36441	37150
20°	35179	35055	35251
25°	28862	32929	29011
30°	20578	27208	20612
35°	14842	18022	14889
40°	11903	10480	11903
45°	9074	6113	9006
50°	5989	3903	5974
55°	4021	2624	3987
60°	2702	1795	2740
65°	1849	1256	1826
70°	1241	903	1241
75°	820	671	820
80°	556	500	556
85°	443	443	443

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	8.8
10°-20°	103.5	23.9
20°-30°	129.3	29.9
30°-40°	87.0	20.1
40°-50°	45.9	10.6
50°-60°	18.7	4.3
60°-70°	6.9	1.6
70°-80°	2.2	0.5
80°-90°	0.5	0.1
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°	270.7	62.7
0°-40°	357.7	82.8
0°-60°	422.4	97.8
0°-90°	432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	403	402	403	403	403	38
15°	372	368	365	368	372	104
25°	271	286	309	287	272	122
35°	126	132	153	133	126	81
45°	66	63	45	63	66	51
55°	24	20	16	20	24	22
65°	8	7	6	7	8	8
75°	2	2	2	2	2	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	408.2	408.2	408.2	408.2	408.2
2.5°	407.1	406.9	406.7	406.7	406.9
5°	402.9	402.5	402.6	402.6	402.8
7.5°	396.1	395.9	395.5	396.1	396.1
10°	388.1	387.4	386.5	387.6	388.1
12.5°	379.8	377.9	376.4	377.9	379.8
15°	371.5	368.4	364.8	368.3	371.9
17.5°	360.5	357.4	353.5	358.1	361.6
20°	342.6	342.9	341.4	342.6	343.3
22.5°	313.9	319.7	327.8	319.9	313.0
25°	271.1	286.3	309.3	286.8	272.5
27.5°	225.1	244.4	282.1	245.6	226.5
30°	184.7	201.8	244.2	203.0	185.0
32.5°	149.6	162.3	198.5	163.9	151.2
35°	126.0	132.3	153.0	132.6	126.4
37.5°	108.0	108.0	113.7	108.5	107.5
40°	94.5	90.4	83.2	90.2	94.5
42.5°	81.9	75.7	60.4	75.4	82.1
45°	66.5	63.2	44.8	62.9	66.0
47.5°	51.1	48.8	33.7	48.5	51.5
50°	39.9	36.3	26.0	36.0	39.8
52.5°	30.6	26.8	20.1	26.8	30.4
55°	23.9	20.1	15.6	20.1	23.7
57.5°	18.4	15.3	11.8	15.1	18.3
60°	14.0	11.5	9.3	11.5	14.2
62.5°	10.7	8.8	7.1	8.6	10.6
65°	8.1	6.6	5.5	6.6	8.0
67.5°	5.9	4.9	4.2	4.9	6.0
70°	4.4	3.7	3.2	3.6	4.4
72.5°	3.2	2.7	2.4	2.7	3.2
75°	2.2	1.9	1.8	1.9	2.2
77.5°	1.5	1.4	1.3	1.4	1.5
80°	1.0	0.9	0.9	1.0	1.0
82.5°	0.6	0.6	0.6	0.6	0.6
85°	0.4	0.4	0.4	0.4	0.4
87.5°	0.3	0.3	0.3	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)