

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: **FLDSQ4C50D010 FEU4C509030 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: FLDSQ4C50D010 FEU4C509030 F4LC-SQ-WH
 Description: 4 INCH 5000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

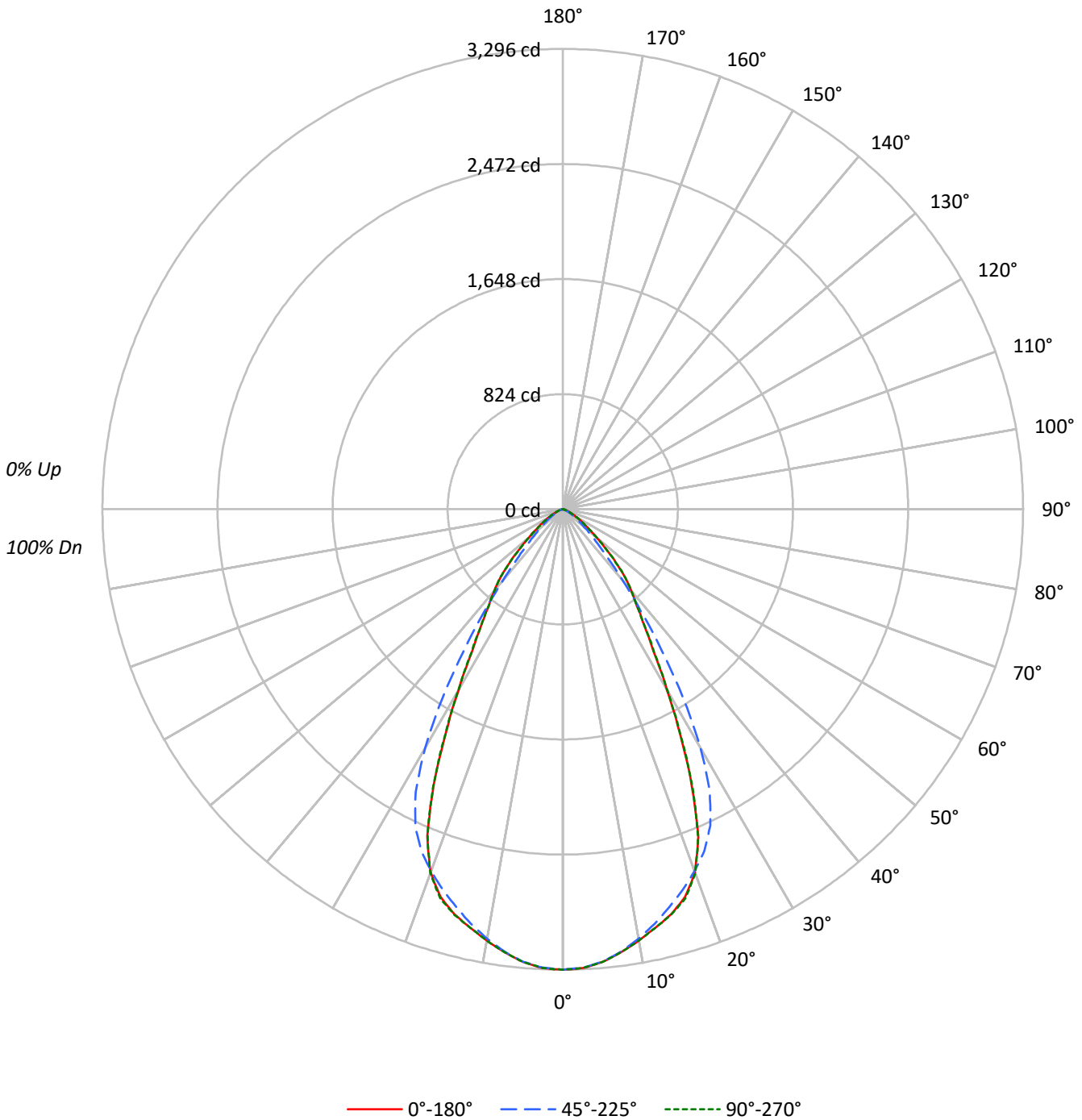
Lumens per Lamp: N/A
 Luminaire Lumens: 3489.0 lumens
 Efficiency: N/A
 Efficacy: 59.7 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 58.4
 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	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°	318066	318066	318066
5°	315155	314951	315058
10°	307091	305866	307091
15°	299698	294294	300008
20°	284150	283082	284684
25°	233081	265957	234305
30°	166210	219712	166433
35°	119876	145590	120241
40°	96105	84593	96105
45°	73345	49370	72772
50°	48380	31523	48215
55°	32534	21162	32181
60°	21864	14435	22077
65°	14954	10206	14726
70°	9959	7335	9959
75°	6599	5443	6599
80°	4612	4056	4612
85°	3432	3432	3432

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.4	8.8
10°-20°	835.6	23.9
20°-30°	1044.6	29.9
30°-40°	702.7	20.1
40°-50°	371.0	10.6
50°-60°	150.8	4.3
60°-70°	55.9	1.6
70°-80°	18.1	0.5
80°-90°	3.9	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°	2186.6	62.7
0°-40°	2889.3	82.8
0°-60°	3411.1	97.8
0°-90°	3489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3296	3296	3296	3296	3296	
5°	3254	3251	3252	3252	3253	307
15°	3000	2975	2946	2974	3003	841
25°	2189	2312	2498	2316	2201	985
35°	1018	1069	1236	1071	1021	655
45°	538	510	362	508	533	412
55°	193	162	126	162	191	179
65°	66	53	45	53	64	67
75°	18	16	15	16	18	21
85°	3	3	3	3	3	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3296.4	3296.4	3296.4	3296.4	3296.4
2.5°	3288.1	3286.1	3285.0	3285.0	3286.1
5°	3253.8	3250.7	3251.7	3251.7	3252.8
7.5°	3198.7	3197.7	3194.6	3198.7	3198.7
10°	3134.3	3129.1	3121.8	3130.1	3134.3
12.5°	3067.7	3052.2	3039.7	3052.2	3067.7
15°	3000.2	2975.2	2946.1	2974.2	3003.3
17.5°	2911.8	2886.9	2854.6	2892.1	2920.1
20°	2767.3	2769.4	2756.9	2767.3	2772.5
22.5°	2535.5	2582.3	2647.8	2583.3	2528.2
25°	2189.3	2312.0	2498.1	2316.1	2200.8
27.5°	1818.2	1974.1	2278.7	1983.5	1829.6
30°	1491.8	1630.0	1972.0	1639.4	1493.8
32.5°	1208.0	1310.9	1603.0	1323.4	1221.5
35°	1017.7	1068.7	1236.0	1070.7	1020.8
37.5°	872.2	872.2	917.9	876.4	868.0
40°	763.0	729.8	671.6	728.7	763.0
42.5°	661.2	611.3	487.6	609.2	663.2
45°	537.5	510.4	361.8	508.3	533.3
47.5°	412.7	394.0	272.4	391.9	415.8
50°	322.3	293.2	210.0	291.1	321.2
52.5°	247.4	216.2	162.2	216.2	245.3
55°	193.4	162.2	125.8	162.2	191.3
57.5°	148.7	123.7	95.6	121.6	147.6
60°	113.3	92.5	74.8	92.5	114.4
62.5°	86.3	70.7	57.2	69.7	85.2
65°	65.5	53.0	44.7	53.0	64.5
67.5°	47.8	39.5	34.3	39.5	48.9
70°	35.3	30.1	26.0	29.1	35.3
72.5°	26.0	21.8	19.8	21.8	26.0
75°	17.7	15.6	14.6	15.6	17.7
77.5°	12.5	11.4	10.4	11.4	12.5
80°	8.3	7.3	7.3	8.3	8.3
82.5°	5.2	5.2	5.2	5.2	5.2
85°	3.1	3.1	3.1	3.1	3.1
87.5°	2.1	2.1	2.1	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)