

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-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: FLDSQ4C60D010 FEU4C609035 F4LC-SQ-WH
Description: 4 INCH 6000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND F4LC-SQW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

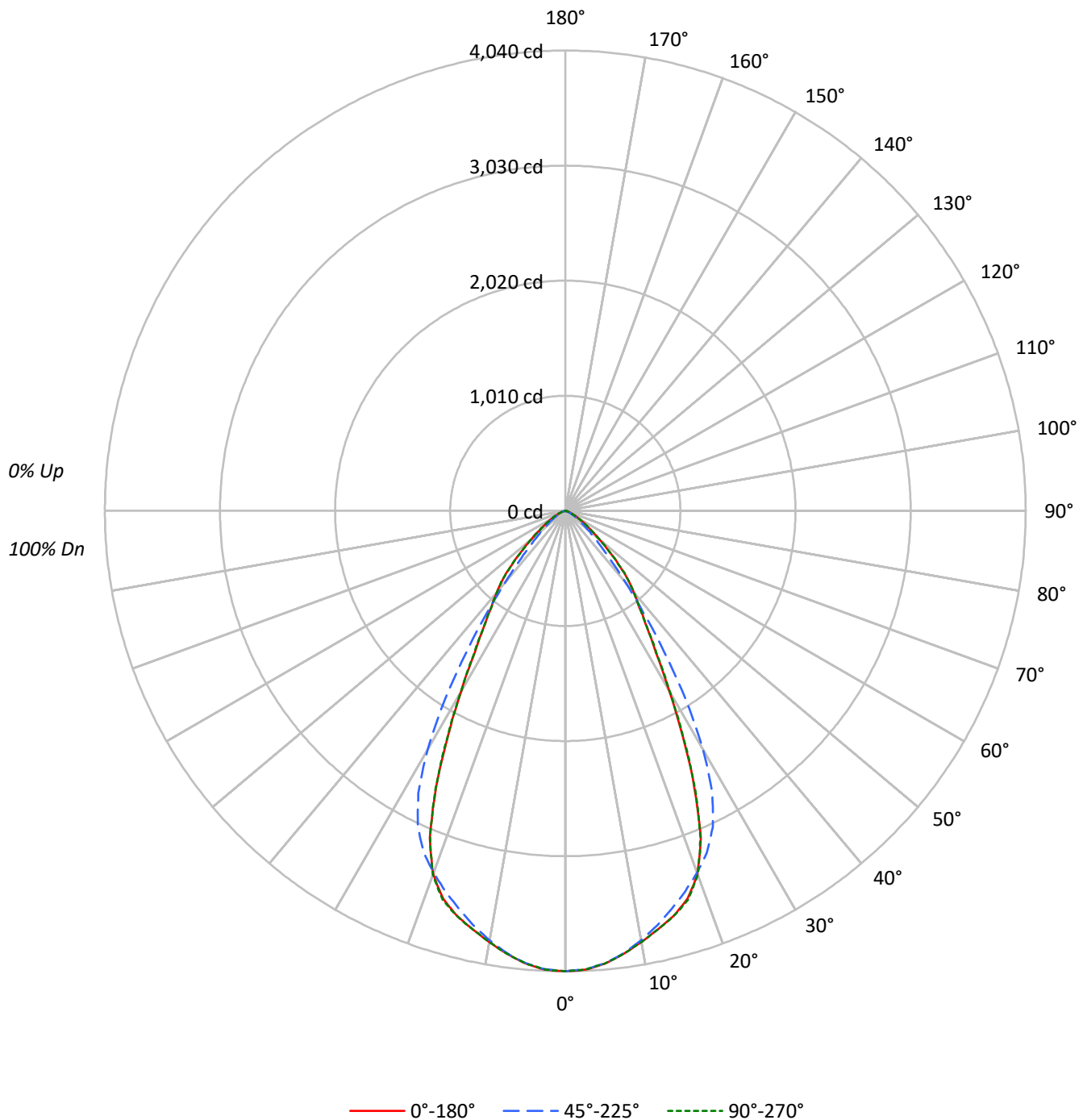
Lumens per Lamp: N/A
Luminaire Lumens: 4276.0 lumens
Efficiency: N/A
Efficacy: 59.4 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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
RW	70	50	30	10	70	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		100
1	113	110	107	105	110	108	105	103	104	102	100		100	98	97		92
2	107	101	97	93	104	99	95	92	96	93	90		93	90	88		84
3	101	93	88	84	98	92	87	83	89	85	82		87	83	80		77
4	95	87	80	76	93	85	80	75	83	78	74		81	77	74		71
5	89	80	74	69	88	79	73	69	78	72	68		76	71	68		66
6	85	75	68	64	83	74	68	63	72	67	63		71	66	63		61
7	80	70	63	59	79	69	63	59	68	62	58		67	62	58		56
8	76	65	59	55	74	65	59	54	64	58	54		63	58	54		52
9	72	61	55	51	71	61	55	51	60	54	51		59	54	50		49
10	68	58	52	48	67	57	51	47	57	51	47		56	51	47		46

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	389815	389815	389815
5°	386248	385996	386122
10°	376361	374861	376361
15°	367295	360682	367675
20°	348244	346940	348901
25°	285663	325939	287154
30°	203701	269281	203980
35°	146921	178430	147369
40°	117795	103663	117795
45°	89884	60505	89188
50°	59293	38638	59098
55°	39869	25940	39432
60°	26805	17696	27036
65°	18333	12512	18037
70°	12216	8999	12216
75°	8090	6636	8090
80°	5668	4945	5668
85°	4207	4207	4207

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	375.6	8.8
10°-20°	1024.0	23.9
20°-30°	1280.2	29.9
30°-40°	861.2	20.1
40°-50°	454.7	10.6
50°-60°	184.8	4.3
60°-70°	68.5	1.6
70°-80°	22.1	0.5
80°-90°	4.8	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°	2679.8	62.7
0°-40°	3541.0	82.8
0°-60°	4180.6	97.8
0°-90°	4276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4040	4040	4040	4040	4040	
5°	3988	3984	3985	3985	3986	376
15°	3677	3646	3611	3645	3681	1030
25°	2683	2834	3062	2839	2697	1208
35°	1247	1310	1515	1312	1251	803
45°	659	626	443	623	654	505
55°	237	199	154	199	234	220
65°	80	65	55	65	79	83
75°	22	19	18	19	22	25
85°	4	4	4	4	4	5
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4040.0	4040.0	4040.0	4040.0	4040.0
2.5°	4029.8	4027.3	4026.0	4026.0	4027.3
5°	3987.8	3984.0	3985.2	3985.2	3986.5
7.5°	3920.3	3919.0	3915.2	3920.3	3920.3
10°	3841.3	3834.9	3826.0	3836.2	3841.3
12.5°	3759.7	3740.6	3725.3	3740.6	3759.7
15°	3676.9	3646.3	3610.7	3645.1	3680.7
17.5°	3568.6	3538.0	3498.5	3544.4	3578.8
20°	3391.5	3394.1	3378.8	3391.5	3397.9
22.5°	3107.4	3164.7	3245.0	3166.0	3098.5
25°	2683.2	2833.5	3061.5	2838.6	2697.2
27.5°	2228.3	2419.4	2792.7	2430.9	2242.3
30°	1828.3	1997.7	2416.9	2009.2	1830.8
32.5°	1480.4	1606.6	1964.6	1621.9	1497.0
35°	1247.3	1309.7	1514.8	1312.3	1251.1
37.5°	1068.9	1068.9	1125.0	1074.0	1063.8
40°	935.2	894.4	823.0	893.1	935.2
42.5°	810.3	749.1	597.5	746.6	812.8
45°	658.7	625.6	443.4	623.0	653.6
47.5°	505.8	482.9	333.8	480.3	509.6
50°	395.0	359.3	257.4	356.7	393.7
52.5°	303.2	265.0	198.8	265.0	300.7
55°	237.0	198.8	154.2	198.8	234.4
57.5°	182.2	151.6	117.2	149.1	180.9
60°	138.9	113.4	91.7	113.4	140.1
62.5°	105.7	86.6	70.1	85.4	104.5
65°	80.3	65.0	54.8	65.0	79.0
67.5°	58.6	48.4	42.0	48.4	59.9
70°	43.3	36.9	31.9	35.7	43.3
72.5°	31.9	26.8	24.2	26.8	31.9
75°	21.7	19.1	17.8	19.1	21.7
77.5°	15.3	14.0	12.7	14.0	15.3
80°	10.2	8.9	8.9	10.2	10.2
82.5°	6.4	6.4	6.4	6.4	6.4
85°	3.8	3.8	3.8	3.8	3.8
87.5°	2.5	2.5	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)