

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 FEU4C609027 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 FEU4C609027 F4LC-SQ-WH
 Description: 4 INCH 6000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

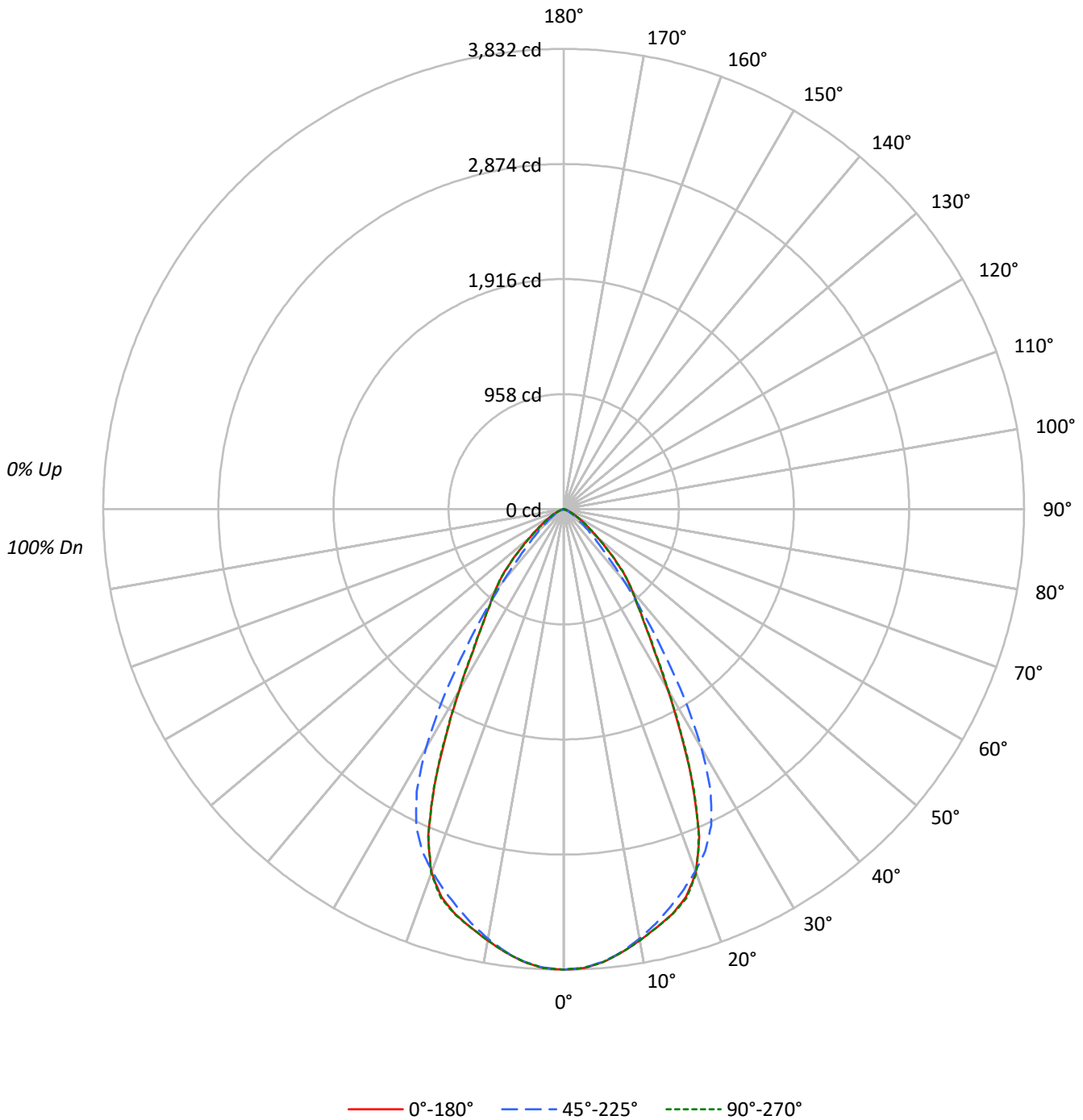
Lumens per Lamp: N/A
 Luminaire Lumens: 4056.0 lumens
 Efficiency: N/A
 Efficacy: 56.3 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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				
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°	369765	369765	369765
5°	366373	366141	366257
10°	356990	355570	356990
15°	348396	342122	348765
20°	330326	329083	330952
25°	270961	309171	272377
30°	193217	255421	193485
35°	139359	169254	139783
40°	111724	98335	111724
45°	85258	57393	84603
50°	56231	36642	56051
55°	37817	24594	37413
60°	25415	16789	25647
65°	17375	11872	17101
70°	11595	8520	11595
75°	7642	6300	7642
80°	5390	4723	5390
85°	3986	3986	3986

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.2	8.8
10°-20°	971.4	23.9
20°-30°	1214.3	29.9
30°-40°	816.9	20.1
40°-50°	431.3	10.6
50°-60°	175.3	4.3
60°-70°	65.0	1.6
70°-80°	21.0	0.5
80°-90°	4.5	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°	2541.9	62.7
0°-40°	3358.8	82.8
0°-60°	3965.5	97.8
0°-90°	4056.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4056.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3832	3832	3832	3832	3832	
5°	3783	3779	3780	3780	3781	357
15°	3488	3459	3425	3458	3491	977
25°	2545	2688	2904	2692	2558	1146
35°	1183	1242	1437	1245	1187	761
45°	625	593	421	591	620	479
55°	225	188	146	188	222	208
65°	76	62	52	62	75	78
75°	20	18	17	18	20	24
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°	3832.2	3832.2	3832.2	3832.2	3832.2
2.5°	3822.5	3820.1	3818.9	3818.9	3820.1
5°	3782.6	3779.0	3780.2	3780.2	3781.4
7.5°	3718.6	3717.3	3713.7	3718.6	3718.6
10°	3643.6	3637.6	3629.1	3638.8	3643.6
12.5°	3566.3	3548.2	3533.7	3548.2	3566.3
15°	3487.7	3458.7	3424.9	3457.5	3491.4
17.5°	3385.0	3356.0	3318.5	3362.1	3394.7
20°	3217.0	3219.4	3204.9	3217.0	3223.1
22.5°	2947.5	3001.9	3078.1	3003.1	2939.1
25°	2545.1	2687.7	2904.0	2692.5	2558.4
27.5°	2113.7	2294.9	2649.0	2305.8	2127.0
30°	1734.2	1894.9	2292.5	1905.8	1736.6
32.5°	1404.3	1523.9	1863.5	1538.4	1420.0
35°	1183.1	1242.3	1436.9	1244.8	1186.7
37.5°	1013.9	1013.9	1067.1	1018.8	1009.1
40°	887.0	848.4	780.7	847.2	887.0
42.5°	768.6	710.6	566.8	708.2	771.0
45°	624.8	593.4	420.6	591.0	620.0
47.5°	479.8	458.0	316.6	455.6	483.4
50°	374.6	340.8	244.1	338.4	373.4
52.5°	287.6	251.4	188.5	251.4	285.2
55°	224.8	188.5	146.2	188.5	222.4
57.5°	172.8	143.8	111.2	141.4	171.6
60°	131.7	107.6	87.0	107.6	132.9
62.5°	100.3	82.2	66.5	81.0	99.1
65°	76.1	61.6	52.0	61.6	74.9
67.5°	55.6	45.9	39.9	45.9	56.8
70°	41.1	35.0	30.2	33.8	41.1
72.5°	30.2	25.4	23.0	25.4	30.2
75°	20.5	18.1	16.9	18.1	20.5
77.5°	14.5	13.3	12.1	13.3	14.5
80°	9.7	8.5	8.5	9.7	9.7
82.5°	6.0	6.0	6.0	6.0	6.0
85°	3.6	3.6	3.6	3.6	3.6
87.5°	2.4	2.4	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)