

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: **FLDSQ4C55D010 FEU4C559027 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: FLDSQ4C55D010 FEU4C559027 F4LC-SQ-WH
 Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

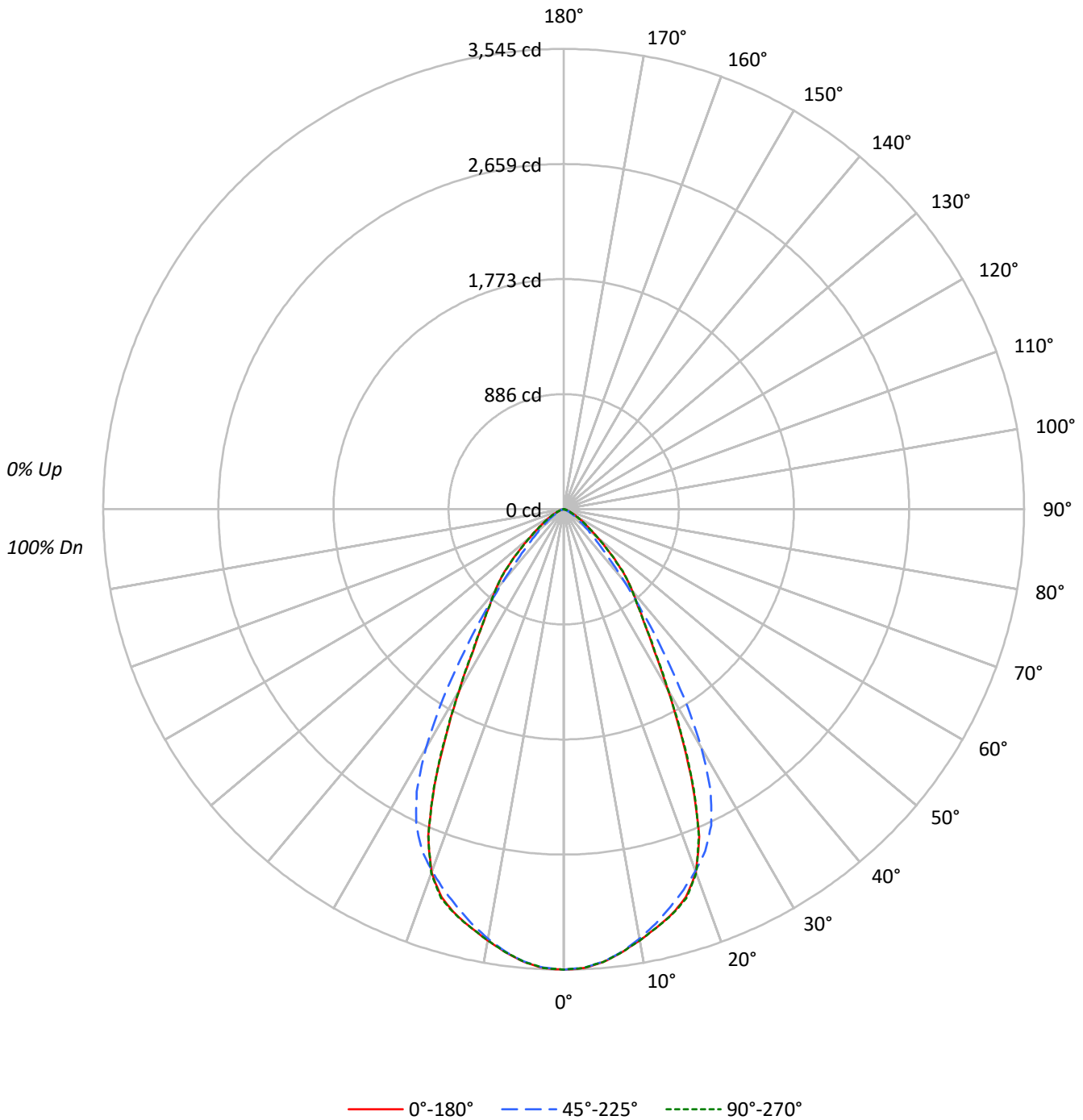
Lumens per Lamp: N/A
 Luminaire Lumens: 3752.0 lumens
 Efficiency: N/A
 Efficacy: 58.7 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 63.9
 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°	342043	342043	342043
5°	338914	338701	338807
10°	330233	328920	330233
15°	322284	316480	322623
20°	305569	304419	306144
25°	250648	286004	251957
30°	178733	236279	178989
35°	128911	156568	129311
40°	103361	90966	103361
45°	78872	53081	78257
50°	52028	33895	51848
55°	34974	22761	34604
60°	23524	15535	23736
65°	16073	10982	15822
70°	10720	7871	10720
75°	7083	5853	7083
80°	4945	4334	4945
85°	3764	3764	3764

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.5	8.8
10°-20°	898.6	23.9
20°-30°	1123.3	29.9
30°-40°	755.7	20.1
40°-50°	399.0	10.6
50°-60°	162.2	4.3
60°-70°	60.1	1.6
70°-80°	19.4	0.5
80°-90°	4.2	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°	2351.4	62.7
0°-40°	3107.1	82.8
0°-60°	3668.2	97.8
0°-90°	3752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3752.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3545	3545	3545	3545	3545	
5°	3499	3496	3497	3497	3498	330
15°	3226	3200	3168	3198	3230	904
25°	2354	2486	2686	2491	2367	1060
35°	1094	1149	1329	1152	1098	704
45°	578	549	389	547	574	443
55°	208	174	135	174	206	193
65°	70	57	48	57	69	73
75°	19	17	16	17	19	22
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°	3544.9	3544.9	3544.9	3544.9	3544.9
2.5°	3536.0	3533.8	3532.6	3532.6	3533.8
5°	3499.1	3495.7	3496.9	3496.9	3498.0
7.5°	3439.8	3438.7	3435.4	3439.8	3439.8
10°	3370.5	3364.9	3357.1	3366.1	3370.5
12.5°	3299.0	3282.2	3268.8	3282.2	3299.0
15°	3226.3	3199.5	3168.2	3198.4	3229.7
17.5°	3131.3	3104.5	3069.8	3110.1	3140.2
20°	2975.9	2978.1	2964.7	2975.9	2981.5
22.5°	2726.6	2776.9	2847.4	2778.0	2718.8
25°	2354.3	2486.3	2686.4	2490.7	2366.6
27.5°	1955.2	2122.9	2450.5	2133.0	1967.5
30°	1604.2	1752.9	2120.7	1763.0	1606.5
32.5°	1299.0	1409.7	1723.8	1423.1	1313.6
35°	1094.4	1149.2	1329.2	1151.5	1097.8
37.5°	937.9	937.9	987.1	942.4	933.5
40°	820.6	784.8	722.2	783.7	820.6
42.5°	711.0	657.3	524.3	655.1	713.2
45°	578.0	548.9	389.0	546.7	573.5
47.5°	443.8	423.7	292.9	421.5	447.2
50°	346.6	315.3	225.8	313.0	345.4
52.5°	266.1	232.5	174.4	232.5	263.8
55°	207.9	174.4	135.3	174.4	205.7
57.5°	159.9	133.0	102.8	130.8	158.7
60°	121.9	99.5	80.5	99.5	123.0
62.5°	92.8	76.0	61.5	74.9	91.7
65°	70.4	57.0	48.1	57.0	69.3
67.5°	51.4	42.5	36.9	42.5	52.5
70°	38.0	32.4	27.9	31.3	38.0
72.5°	27.9	23.5	21.2	23.5	27.9
75°	19.0	16.8	15.7	16.8	19.0
77.5°	13.4	12.3	11.2	12.3	13.4
80°	8.9	7.8	7.8	8.9	8.9
82.5°	5.6	5.6	5.6	5.6	5.6
85°	3.4	3.4	3.4	3.4	3.4
87.5°	2.2	2.2	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)