

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 FEU4C559050 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 FEU4C559050 F4LC-SQ-WH
 Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

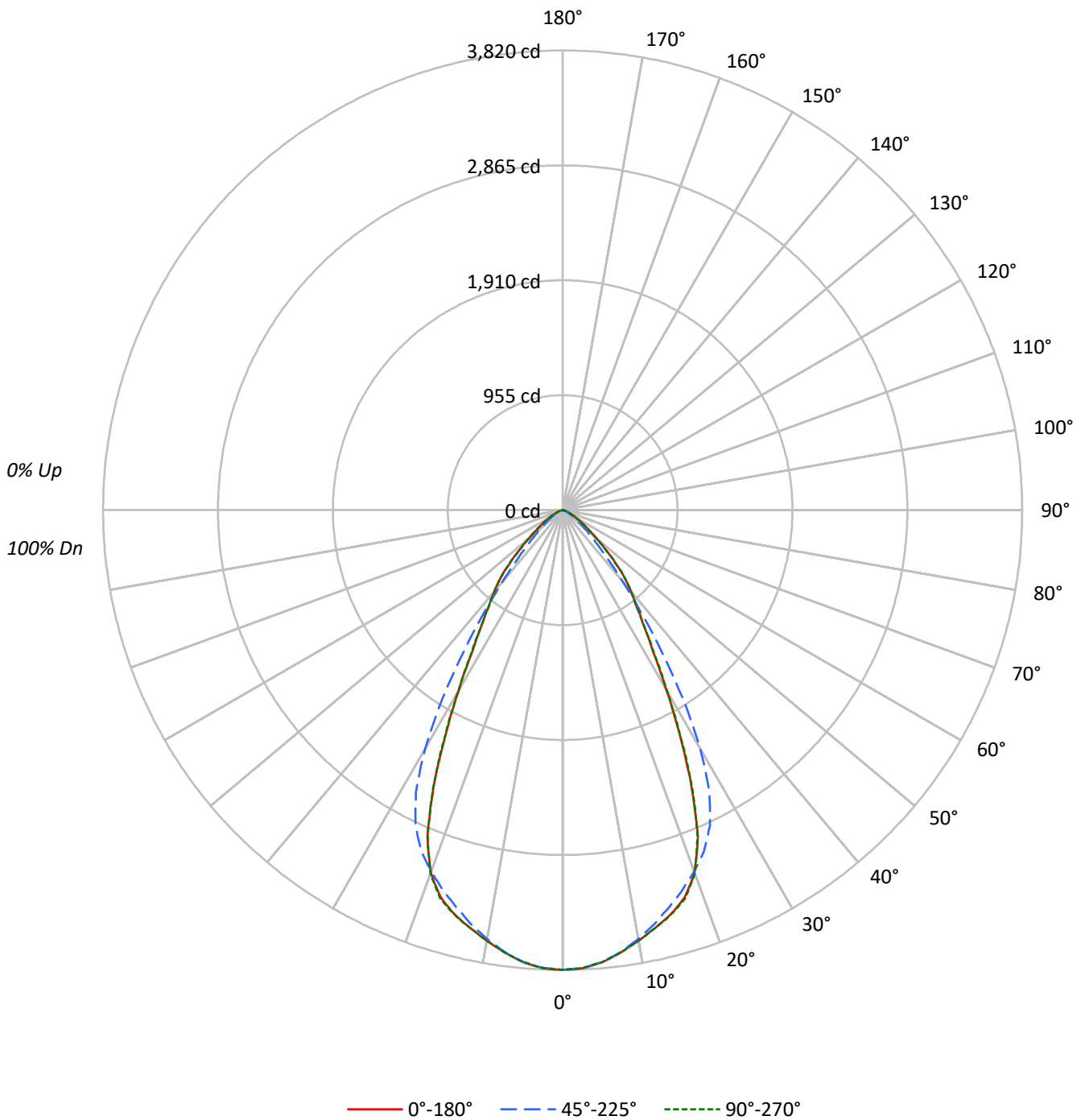
Lumens per Lamp: N/A
 Luminaire Lumens: 4043.0 lumens
 Efficiency: N/A
 Efficacy: 63.3 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 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°	368578	368578	368578
5°	365201	364969	365085
10°	355854	354433	355854
15°	347287	341024	347646
20°	329268	328036	329884
25°	270088	308181	271504
30°	192593	254607	192872
35°	138911	168712	139335
40°	111371	98020	111371
45°	84985	57202	84330
50°	56051	36522	55871
55°	37699	24527	37295
60°	25338	16731	25570
65°	17329	11827	17055
70°	11567	8492	11567
75°	7642	6300	7642
80°	5334	4668	5334
85°	3986	3986	3986

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.1	8.8
10°-20°	968.2	23.9
20°-30°	1210.4	29.9
30°-40°	814.3	20.1
40°-50°	430.0	10.6
50°-60°	174.8	4.3
60°-70°	64.8	1.6
70°-80°	20.9	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°	2533.8	62.7
0°-40°	3348.0	82.8
0°-60°	3952.8	97.8
0°-90°	4043.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4043.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3820	3820	3820	3820	3820	
5°	3770	3767	3768	3768	3769	355
15°	3477	3448	3414	3446	3480	974
25°	2537	2679	2895	2684	2550	1142
35°	1179	1238	1432	1241	1183	759
45°	623	592	419	589	618	478
55°	224	188	146	188	222	208
65°	76	61	52	61	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°	3819.9	3819.9	3819.9	3819.9	3819.9
2.5°	3810.2	3807.8	3806.6	3806.6	3807.8
5°	3770.5	3766.9	3768.1	3768.1	3769.3
7.5°	3706.6	3705.4	3701.8	3706.6	3706.6
10°	3632.0	3625.9	3617.5	3627.1	3632.0
12.5°	3554.9	3536.8	3522.3	3536.8	3554.9
15°	3476.6	3447.6	3413.9	3446.4	3480.2
17.5°	3374.2	3345.3	3307.9	3351.3	3383.8
20°	3206.7	3209.1	3194.7	3206.7	3212.7
22.5°	2938.1	2992.3	3068.2	2993.5	2929.7
25°	2536.9	2679.1	2894.7	2683.9	2550.2
27.5°	2106.9	2287.6	2640.5	2298.4	2120.1
30°	1728.6	1888.9	2285.2	1899.7	1731.1
32.5°	1399.8	1519.0	1857.5	1533.5	1415.4
35°	1179.3	1238.4	1432.3	1240.8	1182.9
37.5°	1010.7	1010.7	1063.7	1015.5	1005.9
40°	884.2	845.6	778.2	844.4	884.2
42.5°	766.1	708.3	565.0	705.9	768.6
45°	622.8	591.5	419.2	589.1	618.0
47.5°	478.2	456.6	315.6	454.1	481.9
50°	373.4	339.7	243.3	337.3	372.2
52.5°	286.7	250.6	187.9	250.6	284.3
55°	224.1	187.9	145.8	187.9	221.7
57.5°	172.3	143.4	110.8	140.9	171.1
60°	131.3	107.2	86.7	107.2	132.5
62.5°	100.0	81.9	66.3	80.7	98.8
65°	75.9	61.4	51.8	61.4	74.7
67.5°	55.4	45.8	39.8	45.8	56.6
70°	41.0	34.9	30.1	33.7	41.0
72.5°	30.1	25.3	22.9	25.3	30.1
75°	20.5	18.1	16.9	18.1	20.5
77.5°	14.5	13.3	12.0	13.3	14.5
80°	9.6	8.4	8.4	9.6	9.6
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)