

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: **FLDSQ4C08D010 FEU4C089035 F4LC-SQ-WLI**

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: FLDSQ4C08D010 FEU4C089035 F4LC-SQ-WLI
 Description: 4 INCH 800 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

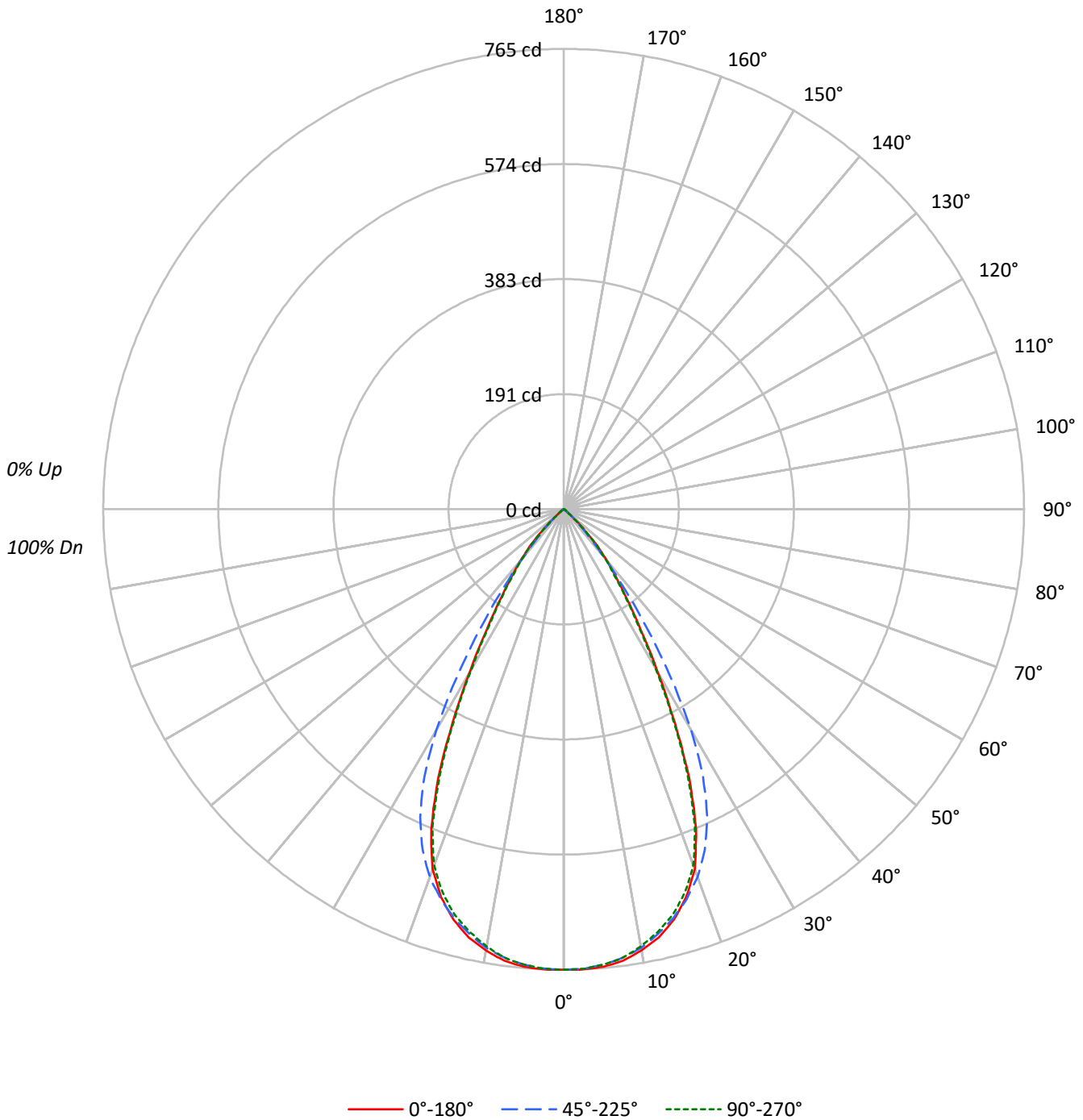
Lumens per Lamp: N/A
 Luminaire Lumens: 685.0 lumens
 Efficiency: N/A
 Efficacy: 69.2 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.9
 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				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	114	111	108	106	111	109	106	104	105	103	101		101	100	98		97	96	95	94
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93	91	89	87
3	103	96	91	88	101	95	90	87	92	89	85		90	87	84		88	85	83	81
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		83	80	77	76
5	93	84	79	74	91	83	78	74	82	77	73		80	76	73		79	75	72	71
6	88	79	73	69	87	79	73	69	77	72	68		76	71	68		74	71	68	66
7	84	75	69	65	82	74	68	64	73	68	64		71	67	64		70	66	63	62
8	80	70	64	60	79	70	64	60	69	64	60		68	63	60		67	63	59	58
9	76	66	61	57	75	66	60	57	65	60	56		64	60	56		63	59	56	55
10	72	63	57	53	71	62	57	53	62	57	53		61	56	53		60	56	53	52

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	73833	73833	73833
5°	73902	73563	73563
10°	72934	72503	72278
15°	70564	70235	69765
20°	65357	66784	64638
25°	52550	60067	51858
30°	34684	47095	33859
35°	21674	28282	21285
40°	14145	13112	13591
45°	6809	5226	6427
50°	1711	2087	1606
55°	942	858	908
60°	637	540	618
65°	434	411	434
70°	339	310	339
75°	261	261	261
80°	222	278	278
85°	221	443	443

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	10.5
10°-20°	196.5	28.7
20°-30°	234.2	34.2
30°-40°	132.6	19.4
40°-50°	41.0	6.0
50°-60°	5.7	0.8
60°-70°	1.9	0.3
70°-80°	0.8	0.1
80°-90°	0.4	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°	502.6	73.4
0°-40°	635.3	92.7
0°-60°	681.9	99.6
0°-90°	685.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	685.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	763	761	760	759	760	72
15°	706	705	703	700	698	197
25°	494	522	564	523	487	220
35°	184	201	240	201	181	120
45°	50	58	38	57	47	41
55°	6	6	5	5	5	6
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	765.2	765.2	765.2	765.2	765.2
2.5°	765.3	764.1	763.8	763.4	764.1
5°	763.0	761.3	759.5	759.0	759.5
7.5°	756.5	754.8	751.8	751.1	751.6
10°	744.4	742.8	740.0	738.4	737.7
12.5°	728.4	725.8	723.1	721.4	719.6
15°	706.4	705.2	703.1	700.3	698.4
17.5°	676.0	677.8	679.0	673.4	668.3
20°	636.5	643.0	650.4	638.9	629.5
22.5°	574.8	593.4	612.2	590.6	569.5
25°	493.6	522.4	564.2	523.3	487.1
27.5°	398.8	435.4	501.3	435.6	393.6
30°	311.3	348.9	422.7	344.0	303.9
32.5°	239.1	267.2	330.3	263.0	234.0
35°	184.0	200.7	240.1	201.3	180.7
37.5°	143.1	151.5	161.5	148.5	138.9
40°	112.3	112.7	104.1	110.9	107.9
42.5°	83.3	83.0	64.0	80.9	81.4
45°	49.9	58.2	38.3	56.6	47.1
47.5°	23.7	32.9	23.0	31.1	22.0
50°	11.4	15.8	13.9	14.8	10.7
52.5°	7.7	8.1	7.9	7.7	7.4
55°	5.6	5.6	5.1	5.4	5.4
57.5°	4.2	4.2	3.7	4.0	4.0
60°	3.3	3.2	2.8	3.2	3.2
62.5°	2.5	2.5	2.1	2.5	2.5
65°	1.9	1.9	1.8	1.9	1.9
67.5°	1.6	1.6	1.2	1.6	1.4
70°	1.2	1.2	1.1	1.2	1.2
72.5°	0.9	0.9	0.9	0.9	0.9
75°	0.7	0.7	0.7	0.7	0.7
77.5°	0.5	0.5	0.5	0.5	0.5
80°	0.4	0.4	0.5	0.5	0.5
82.5°	0.4	0.4	0.4	0.4	0.4
85°	0.2	0.4	0.4	0.4	0.4
87.5°	0.2	0.2	0.4	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)