

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

Summary

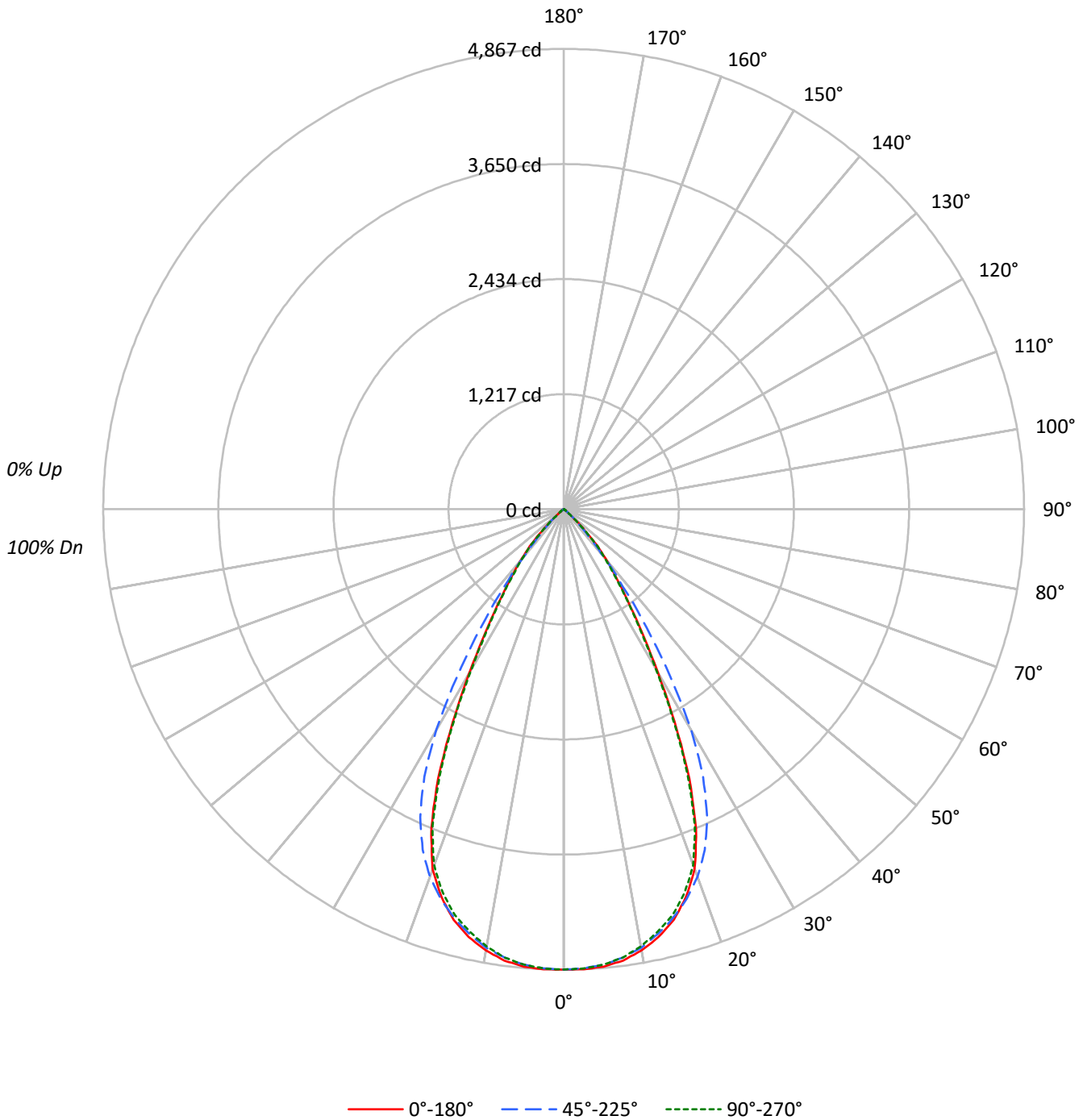
Lumens per Lamp: N/A
 Luminaire Lumens: 4356.0 lumens
 Efficiency: N/A
 Efficacy: 68.2 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 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	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	84	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°	469486	469486	469486
5°	469981	467822	467822
10°	463805	461072	459651
15°	448758	446640	443623
20°	415603	424669	411013
25°	334158	382002	329761
30°	220559	299519	215333
35°	137851	179855	135354
40°	89971	83346	86444
45°	43325	33254	40882
50°	10913	13255	10238
55°	6022	5450	5837
60°	4091	3454	3879
65°	2808	2557	2808
70°	2200	1890	2200
75°	1678	1678	1678
80°	1222	1889	1889
85°	1218	2436	2436

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	457.6	10.5
10°-20°	1249.6	28.7
20°-30°	1489.2	34.2
30°-40°	843.3	19.4
40°-50°	260.7	6.0
50°-60°	36.2	0.8
60°-70°	12.3	0.3
70°-80°	4.9	0.1
80°-90°	2.0	0.0
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°	3196.5	73.4
0°-40°	4039.7	92.7
0°-60°	4336.7	99.6
0°-90°	4356.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4356.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4866	4866	4866	4866	4866	
5°	4852	4841	4830	4827	4830	459
15°	4492	4485	4471	4453	4441	1253
25°	3139	3322	3588	3328	3097	1399
35°	1170	1276	1527	1280	1149	762
45°	318	370	244	360	300	262
55°	36	36	32	35	35	35
65°	12	12	11	12	12	13
75°	4	4	4	4	4	5
85°	1	2	2	2	2	1
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4865.7	4865.7	4865.7	4865.7	4865.7
2.5°	4866.8	4859.0	4856.8	4854.6	4859.0
5°	4852.3	4841.1	4830.0	4826.6	4830.0
7.5°	4811.0	4799.8	4780.8	4776.3	4779.7
10°	4733.8	4723.8	4705.9	4695.8	4691.4
12.5°	4632.1	4615.3	4598.6	4587.4	4576.2
15°	4492.4	4484.6	4471.2	4453.3	4441.0
17.5°	4299.0	4310.2	4318.0	4282.2	4249.8
20°	4047.5	4088.9	4135.8	4063.2	4002.8
22.5°	3655.2	3773.7	3893.3	3755.8	3621.6
25°	3138.7	3322.1	3588.1	3327.7	3097.4
27.5°	2536.3	2768.8	3187.9	2769.9	2502.7
30°	1979.6	2218.8	2688.3	2187.5	1932.7
32.5°	1520.2	1699.0	2100.3	1672.2	1487.8
35°	1170.3	1276.5	1526.9	1279.9	1149.1
37.5°	909.9	963.5	1027.2	944.5	883.1
40°	714.3	716.5	661.7	705.3	686.3
42.5°	529.8	527.6	406.9	514.2	517.5
45°	317.5	370.0	243.7	359.9	299.6
47.5°	150.9	209.0	146.4	197.8	139.7
50°	72.7	100.6	88.3	93.9	68.2
52.5°	49.2	51.4	50.3	49.2	46.9
55°	35.8	35.8	32.4	34.7	34.7
57.5°	26.8	26.8	23.5	25.7	25.7
60°	21.2	20.1	17.9	20.1	20.1
62.5°	15.6	15.6	13.4	15.6	15.6
65°	12.3	12.3	11.2	12.3	12.3
67.5°	10.1	10.1	7.8	10.1	8.9
70°	7.8	7.8	6.7	7.8	7.8
72.5°	5.6	5.6	5.6	5.6	5.6
75°	4.5	4.5	4.5	4.5	4.5
77.5°	3.4	3.4	3.4	3.4	3.4
80°	2.2	2.2	3.4	3.4	3.4
82.5°	2.2	2.2	2.2	2.2	2.2
85°	1.1	2.2	2.2	2.2	2.2
87.5°	1.1	1.1	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)