

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: **FLDSQ4C30D010 FEU4C309040 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: FLDSQ4C30D010 FEU4C309040 F4LC-SQ-WLI
 Description: 4 INCH 3000 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

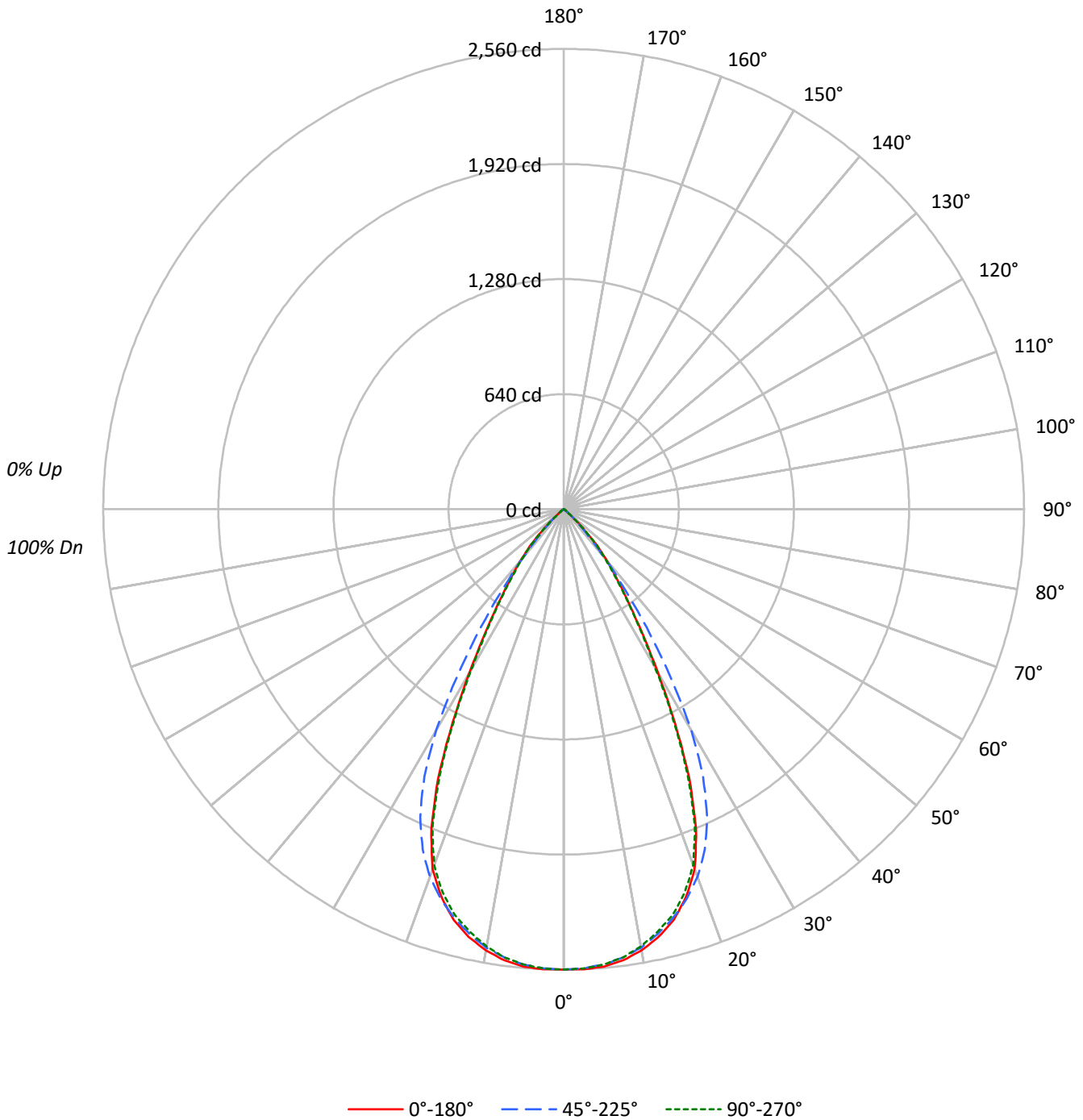
Lumens per Lamp: N/A
 Luminaire Lumens: 2291.0 lumens
 Efficiency: N/A
 Efficacy: 72.5 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 31.6
 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94	94	94	94	
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	
5	93	84	79	74	91	84	78	74	82	77	73	80	76	73	79	75	72	71	71	71	71	
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	71	68	66	66	66	66	
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	59	58	58	58	58	
9	76	66	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	
10	72	63	57	53	71	62	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	246925	246925	246925
5°	247180	246047	246047
10°	243934	242494	241749
15°	236016	234908	233319
20°	218588	223352	216165
25°	175750	200908	173429
30°	116006	157531	113254
35°	72500	94598	71193
40°	47322	43833	45471
45°	22788	17494	21505
50°	5734	6965	5389
55°	3163	2860	3062
60°	2161	1814	2046
65°	1484	1347	1484
70°	1157	987	1157
75°	895	895	895
80°	667	1000	1000
85°	664	1329	1329

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.7	10.5
10°-20°	657.2	28.7
20°-30°	783.2	34.2
30°-40°	443.5	19.4
40°-50°	137.1	6.0
50°-60°	19.0	0.8
60°-70°	6.5	0.3
70°-80°	2.6	0.1
80°-90°	1.1	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°	1681.1	73.4
0°-40°	2124.7	92.7
0°-60°	2280.8	99.6
0°-90°	2291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2559	2559	2559	2559	2559	
5°	2552	2546	2540	2538	2540	242
15°	2363	2359	2352	2342	2336	659
25°	1651	1747	1887	1750	1629	736
35°	616	671	803	673	604	401
45°	167	195	128	189	158	138
55°	19	19	17	18	18	19
65°	6	6	6	6	6	7
75°	2	2	2	2	2	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2559.1	2559.1	2559.1	2559.1	2559.1
2.5°	2559.7	2555.6	2554.4	2553.2	2555.6
5°	2552.0	2546.2	2540.3	2538.5	2540.3
7.5°	2530.3	2524.4	2514.4	2512.1	2513.8
10°	2489.7	2484.4	2475.0	2469.7	2467.4
12.5°	2436.2	2427.4	2418.6	2412.7	2406.8
15°	2362.7	2358.6	2351.6	2342.2	2335.7
17.5°	2261.0	2266.9	2271.0	2252.2	2235.2
20°	2128.8	2150.5	2175.2	2137.0	2105.2
22.5°	1922.4	1984.7	2047.6	1975.3	1904.8
25°	1650.8	1747.2	1887.1	1750.2	1629.0
27.5°	1333.9	1456.2	1676.7	1456.8	1316.3
30°	1041.2	1167.0	1413.9	1150.5	1016.5
32.5°	799.5	893.6	1104.6	879.5	782.5
35°	615.5	671.4	803.1	673.1	604.4
37.5°	478.5	506.8	540.3	496.8	464.4
40°	375.7	376.8	348.0	371.0	361.0
42.5°	278.7	277.5	214.0	270.4	272.2
45°	167.0	194.6	128.2	189.3	157.6
47.5°	79.4	109.9	77.0	104.1	73.5
50°	38.2	52.9	46.4	49.4	35.9
52.5°	25.9	27.0	26.5	25.9	24.7
55°	18.8	18.8	17.0	18.2	18.2
57.5°	14.1	14.1	12.3	13.5	13.5
60°	11.2	10.6	9.4	10.6	10.6
62.5°	8.2	8.2	7.1	8.2	8.2
65°	6.5	6.5	5.9	6.5	6.5
67.5°	5.3	5.3	4.1	5.3	4.7
70°	4.1	4.1	3.5	4.1	4.1
72.5°	2.9	2.9	2.9	2.9	2.9
75°	2.4	2.4	2.4	2.4	2.4
77.5°	1.8	1.8	1.8	1.8	1.8
80°	1.2	1.2	1.8	1.8	1.8
82.5°	1.2	1.2	1.2	1.2	1.2
85°	0.6	1.2	1.2	1.2	1.2
87.5°	0.6	0.6	1.2	1.2	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)