

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: **FLDSQ4C35D010 FEU4C359040 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: FLDSQ4C35D010 FEU4C359040 F4LC-SQ-WH
 Description: 4 INCH 3500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
 AND F4LC-SQW TRIM WITH H FINISH
 Light Source: -
 Ballast/Driver: -

Summary

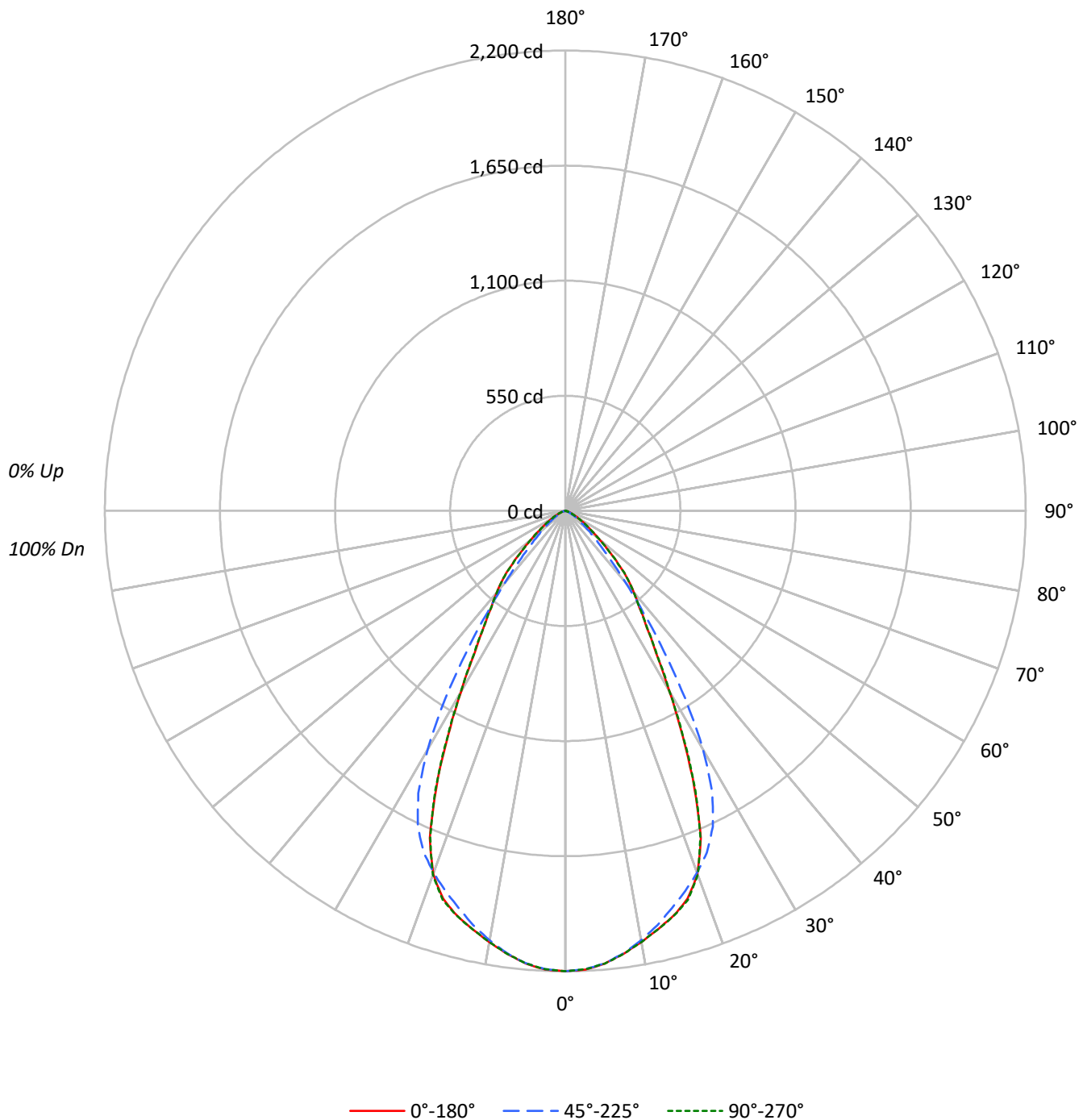
Lumens per Lamp: N/A
 Luminaire Lumens: 2328.0 lumens
 Efficiency: N/A
 Efficacy: 57.6 lumens/watt
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 40.4
 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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	113	110	107	105	110	108	105	103	104	102	100		100	98	97		96
2	107	101	97	93	104	99	95	92	96	93	90		93	90	88		90
3	101	93	88	84	98	92	87	83	89	85	82		87	83	80		85
4	95	87	80	76	93	85	80	75	83	78	74		81	77	74		79
5	89	80	74	69	88	79	73	69	78	72	68		76	71	68		74
6	85	75	68	64	83	74	68	63	72	67	63		71	66	63		70
7	80	70	63	59	79	69	63	59	68	62	58		67	62	58		65
8	76	65	59	55	74	65	59	54	64	58	54		63	58	54		62
9	72	61	55	51	71	61	55	51	60	54	51		59	54	50		58
10	68	58	52	48	67	57	51	47	57	51	47		56	51	47		55

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	212227	212227	212227
5°	210287	210152	210219
10°	204900	204087	204900
15°	199965	196369	200175
20°	189601	188882	189950
25°	155522	177454	156331
30°	110903	146601	111059
35°	79992	97142	80239
40°	64125	56441	64125
45°	48933	32940	48551
50°	32274	21030	32169
55°	21701	14114	21465
60°	14589	9630	14724
65°	9977	6804	9817
70°	6658	4881	6658
75°	4399	3616	4399
80°	3056	2723	3056
85°	2325	2325	2325

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.5	8.8
10°-20°	557.5	23.9
20°-30°	697.0	29.9
30°-40°	468.9	20.1
40°-50°	247.6	10.6
50°-60°	100.6	4.3
60°-70°	37.3	1.6
70°-80°	12.0	0.5
80°-90°	2.6	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°	1459.0	62.7
0°-40°	1927.8	82.8
0°-60°	2276.0	97.8
0°-90°	2328.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2328.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2200	2200	2200	2200	2200	
5°	2171	2169	2170	2170	2170	205
15°	2002	1985	1966	1984	2004	561
25°	1461	1543	1667	1545	1468	658
35°	679	713	825	714	681	437
45°	359	341	241	339	356	275
55°	129	108	84	108	128	120
65°	44	35	30	35	43	45
75°	12	10	10	10	12	14
85°	2	2	2	2	2	3
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2199.5	2199.5	2199.5	2199.5	2199.5
2.5°	2194.0	2192.6	2191.9	2191.9	2192.6
5°	2171.1	2169.0	2169.7	2169.7	2170.4
7.5°	2134.3	2133.6	2131.5	2134.3	2134.3
10°	2091.3	2087.8	2083.0	2088.5	2091.3
12.5°	2046.9	2036.5	2028.2	2036.5	2046.9
15°	2001.8	1985.2	1965.8	1984.5	2003.9
17.5°	1942.9	1926.2	1904.7	1929.7	1948.4
20°	1846.5	1847.8	1839.5	1846.5	1849.9
22.5°	1691.8	1723.0	1766.7	1723.7	1686.9
25°	1460.8	1542.6	1666.8	1545.4	1468.4
27.5°	1213.2	1317.2	1520.5	1323.5	1220.8
30°	995.4	1087.6	1315.8	1093.9	996.8
32.5°	806.0	874.7	1069.6	883.0	815.0
35°	679.1	713.1	824.7	714.4	681.2
37.5°	582.0	582.0	612.5	584.7	579.2
40°	509.1	486.9	448.1	486.2	509.1
42.5°	441.2	407.9	325.3	406.5	442.5
45°	358.6	340.6	241.4	339.2	355.8
47.5°	275.4	262.9	181.7	261.5	277.5
50°	215.0	195.6	140.1	194.2	214.3
52.5°	165.1	144.3	108.2	144.3	163.7
55°	129.0	108.2	83.9	108.2	127.6
57.5°	99.2	82.5	63.8	81.2	98.5
60°	75.6	61.7	49.9	61.7	76.3
62.5°	57.6	47.2	38.2	46.5	56.9
65°	43.7	35.4	29.8	35.4	43.0
67.5°	31.9	26.4	22.9	26.4	32.6
70°	23.6	20.1	17.3	19.4	23.6
72.5°	17.3	14.6	13.2	14.6	17.3
75°	11.8	10.4	9.7	10.4	11.8
77.5°	8.3	7.6	6.9	7.6	8.3
80°	5.5	4.9	4.9	5.5	5.5
82.5°	3.5	3.5	3.5	3.5	3.5
85°	2.1	2.1	2.1	2.1	2.1
87.5°	1.4	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)