

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: **FLDSQ4C75D010 FEU4C759030 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: FLDSQ4C75D010 FEU4C759030 F4LC-SQ-WLI
 Description: 4 INCH 7500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH
 Light Source: -
 Ballast/Driver: -

Summary

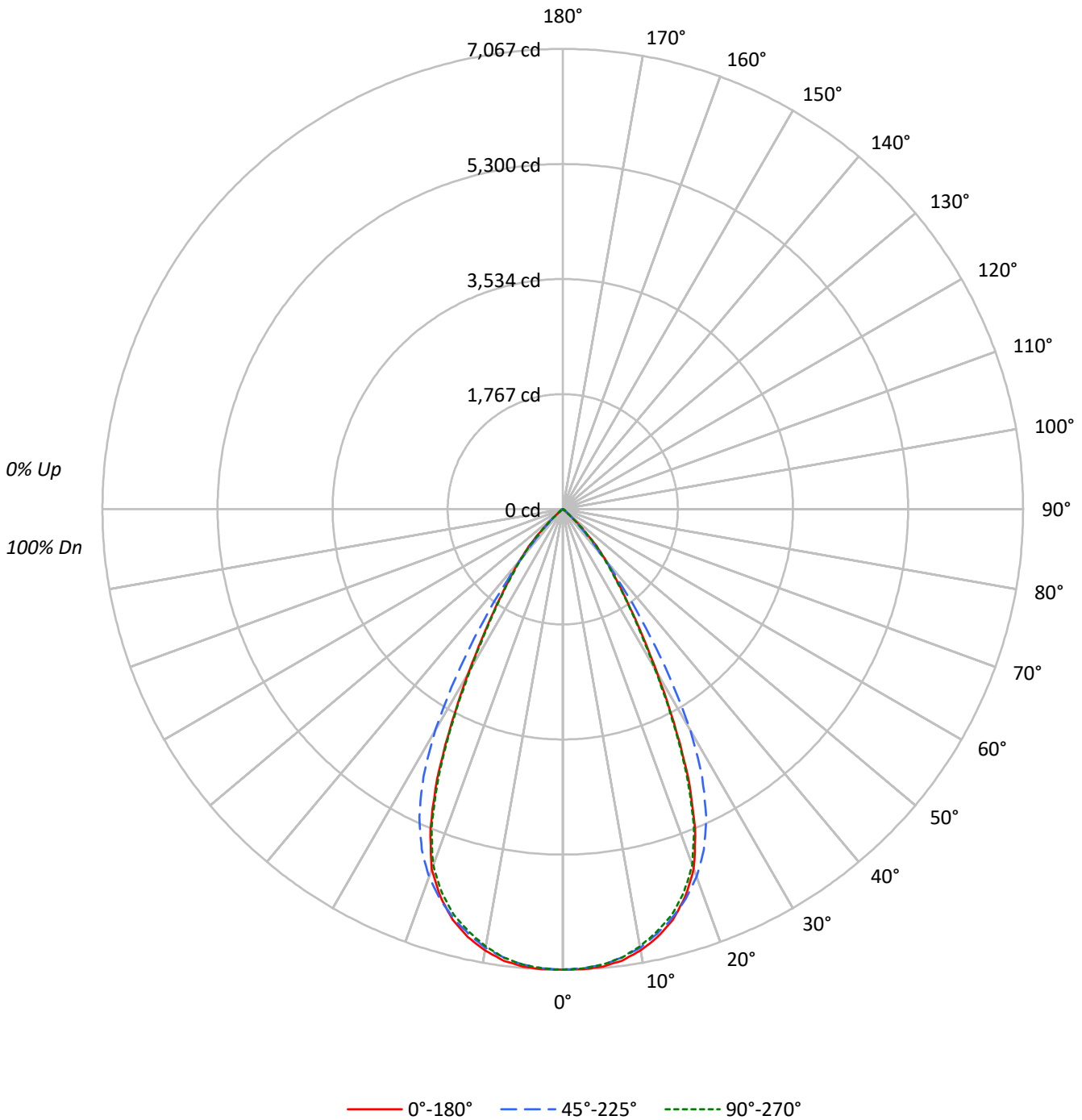
Lumens per Lamp: N/A
 Luminaire Lumens: 6325.0 lumens
 Efficiency: N/A
 Efficacy: 77.6 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 81.5
 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°	681704	681704	681704
5°	682429	679281	679281
10°	673457	669480	667412
15°	651600	648523	644148
20°	603468	616632	596794
25°	485208	554676	478821
30°	320254	434900	312666
35°	200163	261155	196535
40°	130630	121020	125529
45°	62893	48278	59358
50°	15837	19244	14861
55°	8731	7923	8462
60°	5944	5017	5635
65°	4087	3699	4087
70°	3216	2737	3216
75°	2423	2423	2423
80°	1778	2723	2723
85°	1771	3543	3543

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	664.4	10.5
10°-20°	1814.5	28.7
20°-30°	2162.4	34.2
30°-40°	1224.5	19.4
40°-50°	378.5	6.0
50°-60°	52.6	0.8
60°-70°	17.9	0.3
70°-80°	7.1	0.1
80°-90°	3.0	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°	4641.3	73.4
0°-40°	5865.8	92.7
0°-60°	6296.9	99.6
0°-90°	6325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6325.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7065	7065	7065	7065	7065	
5°	7046	7029	7013	7008	7013	667
15°	6523	6512	6492	6466	6448	1819
25°	4558	4824	5210	4832	4498	2032
35°	1699	1854	2217	1858	1668	1106
45°	461	537	354	523	435	381
55°	52	52	47	50	50	51
65°	18	18	16	18	18	19
75°	6	6	6	6	6	7
85°	2	3	3	3	3	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7065.1	7065.1	7065.1	7065.1	7065.1
2.5°	7066.8	7055.4	7052.2	7048.9	7055.4
5°	7045.7	7029.4	7013.2	7008.3	7013.2
7.5°	6985.6	6969.4	6941.8	6935.3	6940.2
10°	6873.6	6859.0	6833.0	6818.4	6811.9
12.5°	6725.9	6701.6	6677.2	6661.0	6644.8
15°	6523.0	6511.7	6492.2	6466.2	6448.4
17.5°	6242.3	6258.5	6269.8	6217.9	6170.8
20°	5877.1	5937.1	6005.3	5899.8	5812.1
22.5°	5307.4	5479.4	5653.1	5453.5	5258.7
25°	4557.5	4823.7	5210.0	4831.8	4497.5
27.5°	3682.7	4020.3	4628.9	4021.9	3634.0
30°	2874.4	3221.8	3903.4	3176.3	2806.3
32.5°	2207.3	2467.0	3049.7	2428.1	2160.3
35°	1699.3	1853.5	2217.1	1858.4	1668.5
37.5°	1321.2	1399.1	1491.6	1371.5	1282.2
40°	1037.1	1040.4	960.8	1024.1	996.6
42.5°	769.3	766.1	590.8	746.6	751.5
45°	460.9	537.2	353.8	522.6	435.0
47.5°	219.1	303.5	212.6	287.3	202.9
50°	105.5	146.1	128.2	136.3	99.0
52.5°	71.4	74.7	73.0	71.4	68.2
55°	51.9	51.9	47.1	50.3	50.3
57.5°	39.0	39.0	34.1	37.3	37.3
60°	30.8	29.2	26.0	29.2	29.2
62.5°	22.7	22.7	19.5	22.7	22.7
65°	17.9	17.9	16.2	17.9	17.9
67.5°	14.6	14.6	11.4	14.6	13.0
70°	11.4	11.4	9.7	11.4	11.4
72.5°	8.1	8.1	8.1	8.1	8.1
75°	6.5	6.5	6.5	6.5	6.5
77.5°	4.9	4.9	4.9	4.9	4.9
80°	3.2	3.2	4.9	4.9	4.9
82.5°	3.2	3.2	3.2	3.2	3.2
85°	1.6	3.2	3.2	3.2	3.2
87.5°	1.6	1.6	3.2	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)