

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 FEU4C559030 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: FLDSQ4C55D010 FEU4C559030 F4LC-SQ-WH  
 Description: 4 INCH 5500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH H FINISH  
 Light Source: -  
 Ballast/Driver: -

**Summary**

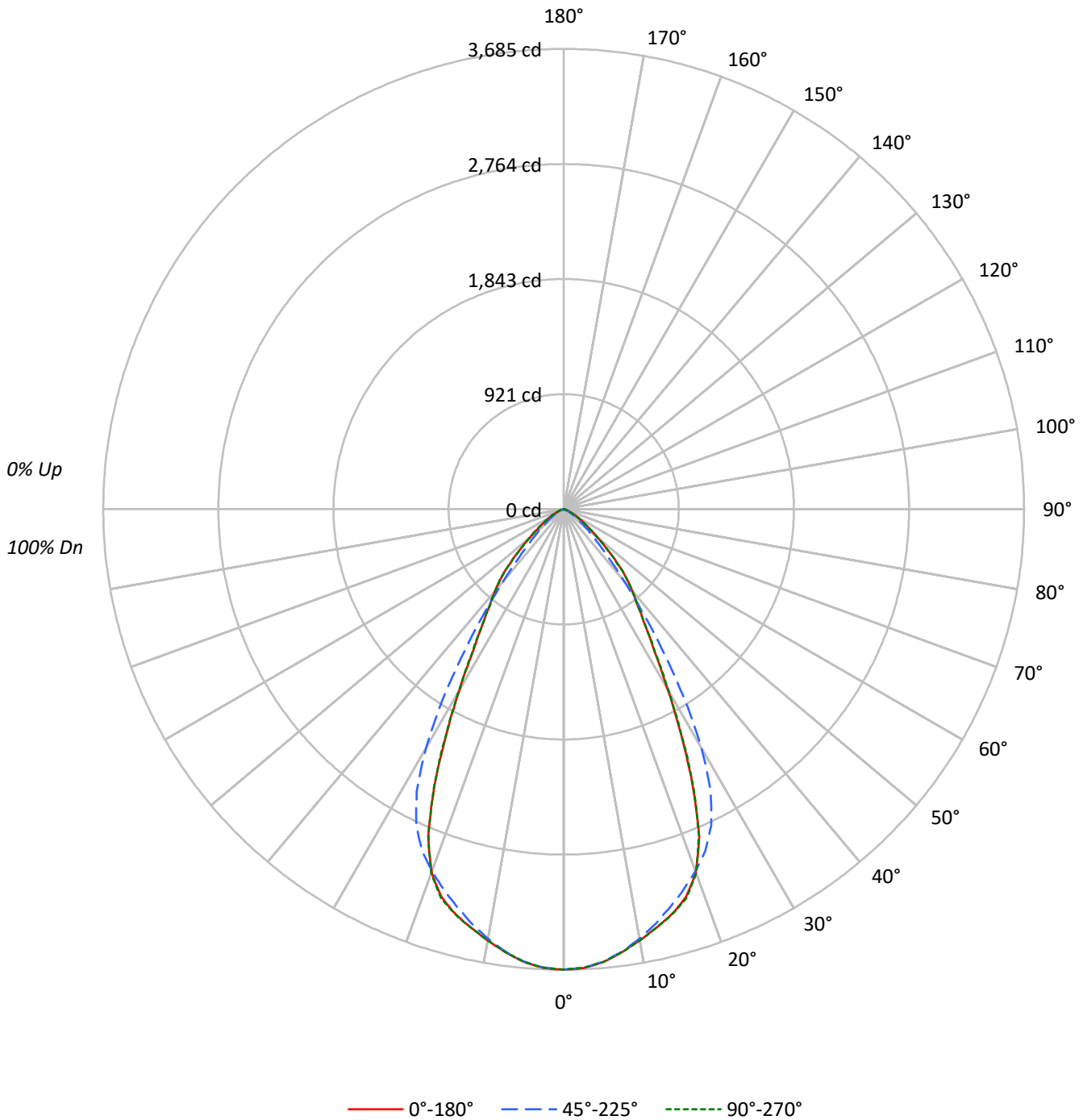
Lumens per Lamp: N/A  
 Luminaire Lumens: 3900.0 lumens  
 Efficiency: N/A  
 Efficacy: 61.0 lumens/watt  
 Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.94  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 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				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	113	110	107	105	110	108	105	103	104	102	100		100	98	97		96	95	94	92
2	107	101	97	93	104	99	95	92	96	93	90		93	90	88		90	88	86	84
3	101	93	88	84	98	92	87	83	89	85	82		87	83	80		85	82	79	77
4	95	87	80	76	93	85	80	75	83	78	74		81	77	74		79	76	73	71
5	89	80	74	69	88	79	73	69	78	72	68		76	71	68		74	70	67	66
6	85	75	68	64	83	74	68	63	72	67	63		71	66	63		70	65	62	61
7	80	70	63	59	79	69	63	59	68	62	58		67	62	58		65	61	58	56
8	76	65	59	55	74	65	59	54	64	58	54		63	58	54		62	57	54	52
9	72	61	55	51	71	61	55	51	60	54	51		59	54	50		58	54	50	49
10	68	58	52	48	67	57	51	47	57	51	47		56	51	47		55	50	47	46

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	355542	355542	355542
5°	352280	352058	352174
10°	343264	341892	343264
15°	335000	328966	335350
20°	317624	316433	318220
25°	260538	297279	261901
30°	185786	245605	186042
35°	133999	162740	134412
40°	107429	94556	107429
45°	81983	55183	81341
50°	54070	35231	53905
55°	36353	23652	35966
60°	24450	16152	24663
65°	16712	11416	16438
70°	11144	8210	11144
75°	7382	6077	7382
80°	5168	4501	5168
85°	3875	3875	3875

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	342.5	8.8
10°-20°	934.0	23.9
20°-30°	1167.6	29.9
30°-40°	785.5	20.1
40°-50°	414.8	10.6
50°-60°	168.6	4.3
60°-70°	62.5	1.6
70°-80°	20.2	0.5
80°-90°	4.3	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°	2444.1	62.7
0°-40°	3229.6	82.8
0°-60°	3813.0	97.8
0°-90°	3900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3900.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3685	3685	3685	3685	3685	
5°	3637	3634	3635	3635	3636	343
15°	3354	3326	3293	3324	3357	940
25°	2447	2584	2792	2589	2460	1102
35°	1138	1195	1382	1197	1141	732
45°	601	571	404	568	596	461
55°	216	181	141	181	214	200
65°	73	59	50	59	72	75
75°	20	17	16	17	20	23
85°	4	4	4	4	4	4
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3684.8	3684.8	3684.8	3684.8	3684.8
2.5°	3675.5	3673.1	3672.0	3672.0	3673.1
5°	3637.1	3633.6	3634.8	3634.8	3636.0
7.5°	3575.5	3574.4	3570.9	3575.5	3575.5
10°	3503.5	3497.7	3489.5	3498.8	3503.5
12.5°	3429.1	3411.7	3397.7	3411.7	3429.1
15°	3353.6	3325.7	3293.2	3324.5	3357.1
17.5°	3254.8	3226.9	3190.9	3232.7	3264.1
20°	3093.3	3095.6	3081.7	3093.3	3099.1
22.5°	2834.2	2886.5	2959.7	2887.6	2826.0
25°	2447.2	2584.3	2792.3	2589.0	2460.0
27.5°	2032.4	2206.7	2547.1	2217.1	2045.2
30°	1667.5	1822.0	2204.4	1832.5	1669.8
32.5°	1350.3	1465.3	1791.8	1479.3	1365.4
35°	1137.6	1194.6	1381.6	1196.9	1141.1
37.5°	974.9	974.9	1026.1	979.6	970.3
40°	852.9	815.7	750.7	814.6	852.9
42.5°	739.0	683.3	545.0	680.9	741.4
45°	600.8	570.6	404.4	568.2	596.1
47.5°	461.3	440.4	304.4	438.1	464.8
50°	360.2	327.7	234.7	325.4	359.1
52.5°	276.6	241.7	181.3	241.7	274.2
55°	216.1	181.3	140.6	181.3	213.8
57.5°	166.2	138.3	106.9	136.0	165.0
60°	126.7	103.4	83.7	103.4	127.8
62.5°	96.4	79.0	63.9	77.9	95.3
65°	73.2	59.3	50.0	59.3	72.0
67.5°	53.5	44.2	38.3	44.2	54.6
70°	39.5	33.7	29.1	32.5	39.5
72.5°	29.1	24.4	22.1	24.4	29.1
75°	19.8	17.4	16.3	17.4	19.8
77.5°	13.9	12.8	11.6	12.8	13.9
80°	9.3	8.1	8.1	9.3	9.3
82.5°	5.8	5.8	5.8	5.8	5.8
85°	3.5	3.5	3.5	3.5	3.5
87.5°	2.3	2.3	2.3	2.3	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)