

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: P563857

Luminaire Tested: **FLDSQ4C05D010 FEU4C059030 F4LC-SQ-WLI-D2W**

Issue Date: 12/13/2022

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P563857  
 Test Lab: INNOVATION CENTER  
 Issue Date: 12/13/2022  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: FAIL-SAFE  
 Catalog Number: FLDSQ4C05D010 FEU4C059030 F4LC-SQ-WLI-D2W  
 Description: 4 INCH 500 LUMEN FAIL-SAFE LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND F4LC-SQW TRIM WITH LI FINISH, DIM TO WARM  
 Light Source: -  
 Ballast/Driver: -

**Summary**

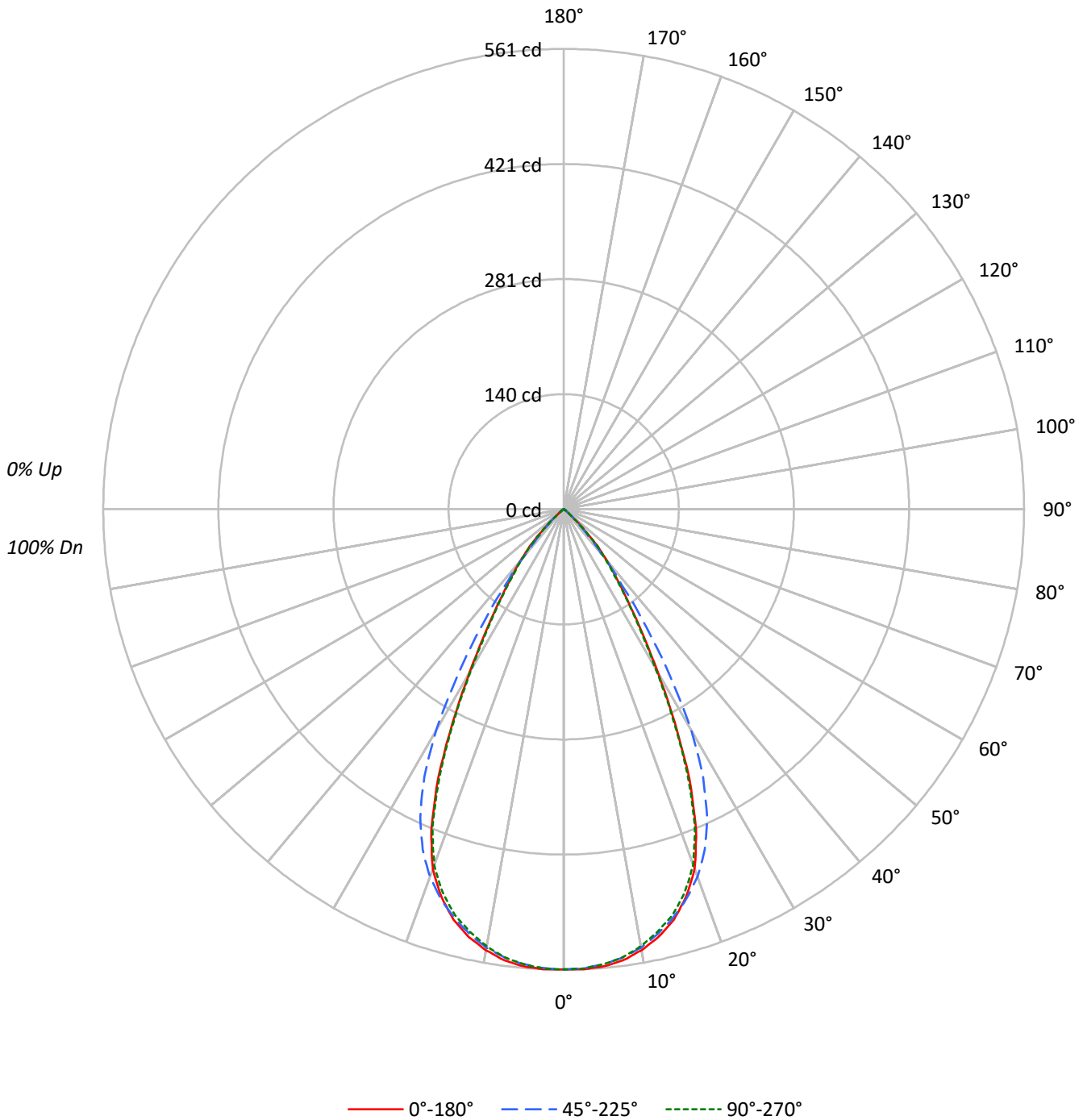
Lumens per Lamp: N/A  
 Luminaire Lumens: 502.0 lumens  
 Efficiency: N/A  
 Efficacy: 69.7 lumens/watt  
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.9  
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
 CIE Type: Direct

Input Watts (W): 7.2  
 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	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	83	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°	54101	54101	54101
5°	54163	53911	53911
10°	53447	53133	52967
15°	51714	51475	51125
20°	47891	48938	47367
25°	38508	44023	38008
30°	25414	34517	24812
35°	15890	20731	15596
40°	10366	9611	9963
45°	4994	3834	4708
50°	1261	1531	1186
55°	690	622	673
60°	463	405	444
65°	320	297	320
70°	254	226	254
75°	186	186	186
80°	167	222	222
85°	111	332	332

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.7	10.5
10°-20°	144.0	28.7
20°-30°	171.6	34.2
30°-40°	97.2	19.4
40°-50°	30.1	6.0
50°-60°	4.2	0.8
60°-70°	1.4	0.3
70°-80°	0.6	0.1
80°-90°	0.3	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°	368.4	73.4
0°-40°	465.6	92.7
0°-60°	499.8	99.6
0°-90°	502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	502.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	559	558	557	556	557	53
15°	518	517	515	513	512	144
25°	362	383	414	384	357	161
35°	135	147	176	148	132	88
45°	37	43	28	42	34	30
55°	4	4	4	4	4	4
65°	1	1	1	1	1	1
75°	0	0	0	0	0	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	560.7	560.7	560.7	560.7	560.7
2.5°	560.9	560.0	559.7	559.5	560.0
5°	559.2	557.9	556.6	556.2	556.6
7.5°	554.4	553.1	551.0	550.4	550.8
10°	545.5	544.4	542.3	541.2	540.6
12.5°	533.8	531.9	530.0	528.7	527.4
15°	517.7	516.8	515.3	513.2	511.8
17.5°	495.4	496.7	497.6	493.5	489.8
20°	466.4	471.2	476.6	468.3	461.3
22.5°	421.2	434.9	448.7	432.8	417.4
25°	361.7	382.8	413.5	383.5	357.0
27.5°	292.3	319.1	367.4	319.2	288.4
30°	228.1	255.7	309.8	252.1	222.7
32.5°	175.2	195.8	242.0	192.7	171.5
35°	134.9	147.1	176.0	147.5	132.4
37.5°	104.9	111.0	118.4	108.9	101.8
40°	82.3	82.6	76.3	81.3	79.1
42.5°	61.1	60.8	46.9	59.3	59.6
45°	36.6	42.6	28.1	41.5	34.5
47.5°	17.4	24.1	16.9	22.8	16.1
50°	8.4	11.6	10.2	10.8	7.9
52.5°	5.7	5.9	5.8	5.7	5.4
55°	4.1	4.1	3.7	4.0	4.0
57.5°	3.1	3.1	2.7	3.0	3.0
60°	2.4	2.3	2.1	2.3	2.3
62.5°	1.8	1.8	1.5	1.8	1.8
65°	1.4	1.4	1.3	1.4	1.4
67.5°	1.2	1.2	0.9	1.2	1.0
70°	0.9	0.9	0.8	0.9	0.9
72.5°	0.6	0.6	0.6	0.6	0.6
75°	0.5	0.5	0.5	0.5	0.5
77.5°	0.4	0.4	0.4	0.4	0.4
80°	0.3	0.3	0.4	0.4	0.4
82.5°	0.3	0.3	0.3	0.3	0.3
85°	0.1	0.3	0.3	0.3	0.3
87.5°	0.1	0.1	0.3	0.3	0.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)