

Scaled data based on original data using
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: P556518

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-93-87-EDD-90**

Issue Date: 7/16/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P556518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-12-4-LD4-1LO-35-UNV-93-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

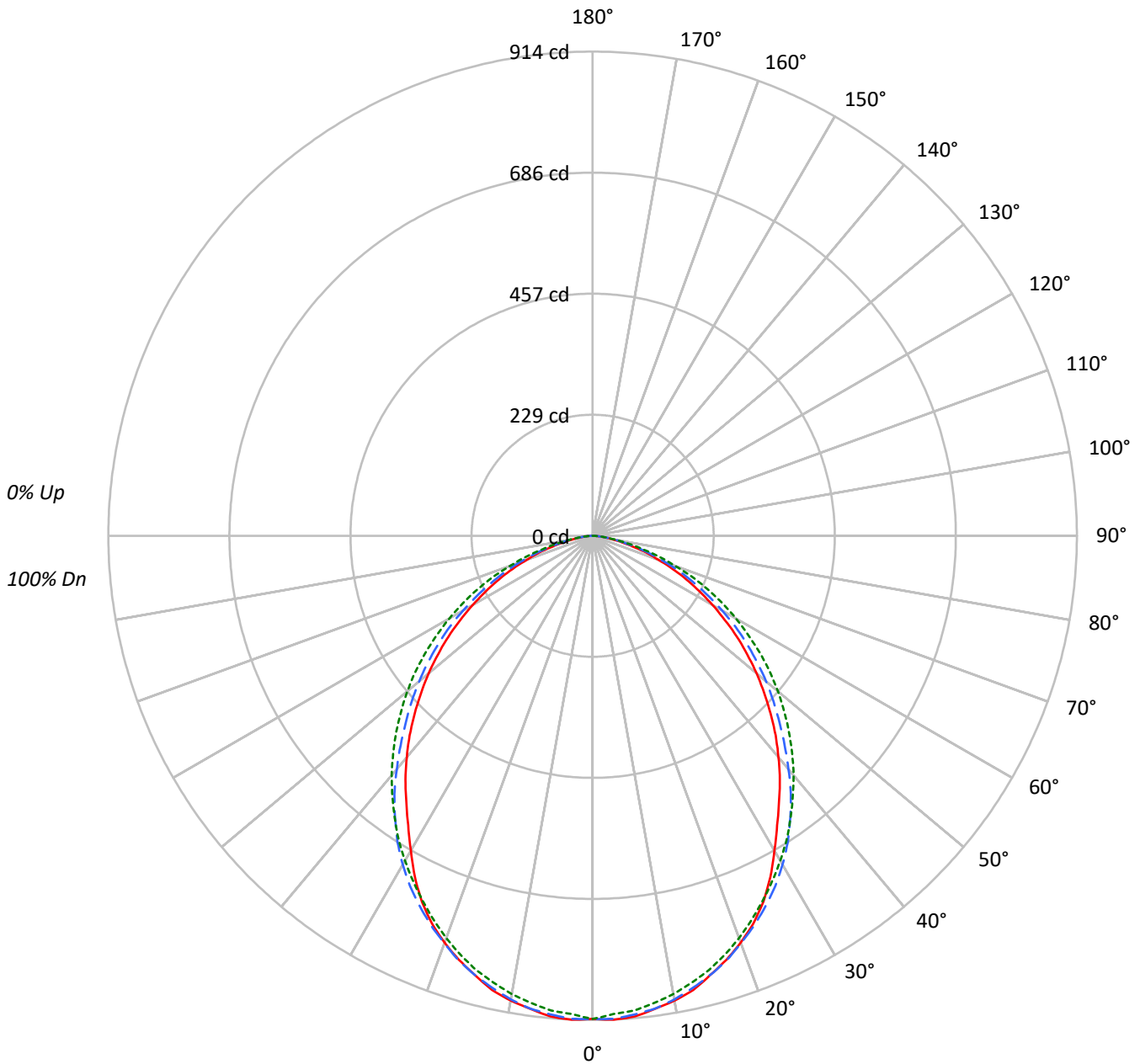
Lumens per Lamp: N/A
Luminaire Lumens: 2109.0 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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

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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	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			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2454	2454	2454
5°	2461	2451	2430
10°	2435	2428	2400
15°	2392	2392	2364
20°	2341	2344	2314
25°	2264	2292	2256
30°	2132	2228	2201
35°	2014	2135	2139
40°	1917	2020	2073
45°	1807	1897	1995
50°	1691	1788	1910
55°	1560	1664	1807
60°	1405	1518	1680
65°	1240	1350	1528
70°	1034	1149	1298
75°	812	918	1017
80°	581	646	717
85°	380	380	358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	4.1
10°-20°	241.2	11.4
20°-30°	352.5	16.7
30°-40°	400.2	19.0
40°-50°	386.3	18.3
50°-60°	318.7	15.1
60°-70°	212.2	10.1
70°-80°	95.0	4.5
80°-90°	17.0	0.8
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°	679.7	32.2
0°-40°	1079.9	51.2
0°-60°	1784.8	84.6
0°-90°	2109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	911	911	907	902	900	86
15°	858	861	858	855	849	242
25°	762	768	772	766	760	349
35°	613	622	650	654	651	384
45°	475	483	499	521	524	366
55°	332	338	355	374	385	297
65°	195	200	212	227	240	193
75°	78	82	88	92	98	85
85°	12	12	12	12	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.1	912.1	912.1	912.1	912.1
2.5°	914.5	914.9	912.8	907.2	903.7
5°	911.0	910.7	907.2	902.3	899.5
7.5°	900.9	901.6	900.5	893.5	889.7
10°	891.1	891.4	888.6	883.0	878.4
12.5°	878.4	878.1	874.2	871.4	864.1
15°	858.5	860.6	858.5	854.6	848.7
17.5°	839.2	839.2	840.6	833.9	829.4
20°	817.5	818.5	818.5	813.3	808.0
22.5°	792.3	795.4	796.5	790.9	784.5
25°	762.5	768.4	771.9	766.3	759.7
27.5°	726.4	735.5	746.0	741.8	734.4
30°	686.1	699.4	716.9	713.4	708.2
32.5°	647.9	661.2	685.4	684.0	681.2
35°	613.2	621.6	650.0	653.5	651.0
37.5°	580.3	588.0	614.6	622.7	620.6
40°	545.6	554.0	575.0	589.4	590.1
42.5°	511.2	519.3	536.5	557.1	557.1
45°	474.8	482.8	498.6	521.4	524.2
47.5°	439.0	447.5	462.9	485.7	490.2
50°	404.0	411.7	427.1	449.2	456.2
52.5°	367.6	376.0	391.0	411.4	421.5
55°	332.5	338.1	354.6	374.2	385.1
57.5°	296.1	301.3	319.9	336.7	347.9
60°	261.0	267.7	282.1	299.2	312.2
62.5°	227.4	234.4	246.7	261.7	276.5
65°	194.8	200.1	212.0	227.1	240.0
67.5°	163.3	167.8	179.8	190.3	203.9
70°	131.4	137.4	146.1	156.3	165.0
72.5°	105.8	108.3	115.6	123.0	132.1
75°	78.1	82.3	88.3	92.5	97.8
77.5°	56.1	58.5	62.0	65.5	70.4
80°	37.5	38.5	41.7	42.4	46.3
82.5°	22.8	23.5	24.2	24.5	25.9
85°	12.3	12.3	12.3	11.6	11.6
87.5°	7.0	7.0	6.0	4.9	3.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)