

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: P556638

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-82-97-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: P556638
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-50-UNV-82-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

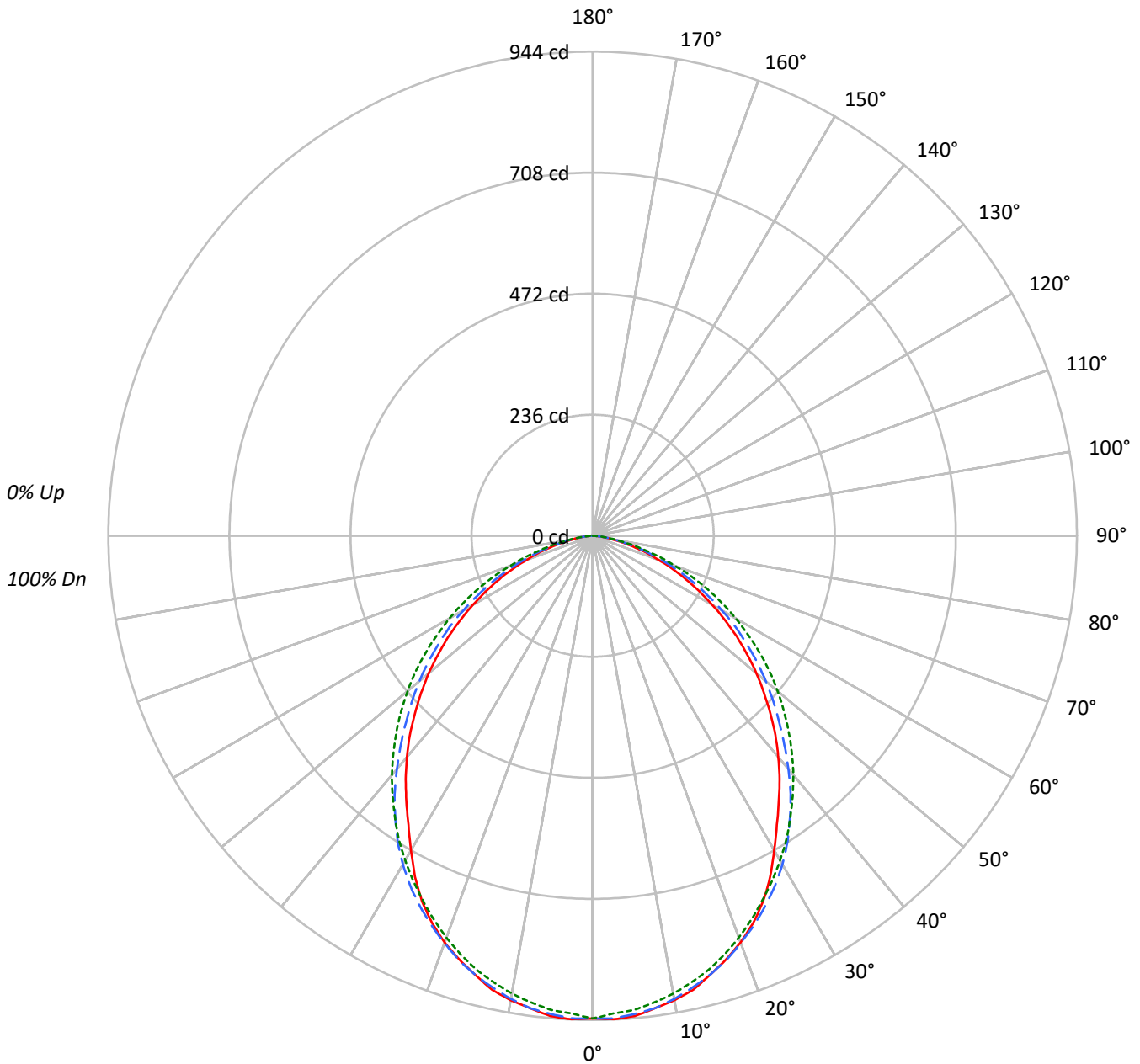
Lumens per Lamp: N/A
Luminaire Lumens: 2176.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P556638

CATALOG NUMBER: FUSL-12-4-LD4-1LO-50-UNV-82-97-EDD-90

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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																			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2532	2532	2532
5°	2539	2528	2507
10°	2512	2505	2477
15°	2467	2467	2439
20°	2416	2418	2387
25°	2336	2365	2327
30°	2200	2298	2270
35°	2078	2203	2207
40°	1977	2084	2139
45°	1864	1958	2058
50°	1745	1845	1971
55°	1610	1717	1864
60°	1449	1566	1734
65°	1280	1393	1577
70°	1067	1186	1340
75°	838	947	1049
80°	600	666	739
85°	392	392	367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.6	4.1
10°-20°	248.9	11.4
20°-30°	363.8	16.7
30°-40°	412.9	19.0
40°-50°	398.6	18.3
50°-60°	328.8	15.1
60°-70°	219.0	10.1
70°-80°	98.0	4.5
80°-90°	17.5	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°	701.3	32.2
0°-40°	1114.2	51.2
0°-60°	1841.5	84.6
0°-90°	2176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2176.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	940	940	936	931	928	89
15°	886	888	886	882	876	250
25°	787	793	796	791	784	360
35°	633	641	671	674	672	396
45°	490	498	514	538	541	378
55°	343	349	366	386	397	306
65°	201	206	219	234	248	199
75°	81	85	91	95	101	88
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	941.1	941.1	941.1	941.1	941.1
2.5°	943.6	944.0	941.8	936.0	932.4
5°	940.0	939.6	936.0	930.9	928.0
7.5°	929.5	930.2	929.1	921.9	917.9
10°	919.4	919.7	916.8	911.1	906.4
12.5°	906.4	906.0	902.0	899.1	891.5
15°	885.7	887.9	885.7	881.8	875.6
17.5°	865.9	865.9	867.3	860.4	855.7
20°	843.5	844.5	844.5	839.1	833.7
22.5°	817.4	820.7	821.8	816.0	809.5
25°	786.7	792.8	796.5	790.7	783.8
27.5°	749.5	758.9	769.7	765.4	757.8
30°	707.9	721.6	739.7	736.1	730.7
32.5°	668.5	682.2	707.2	705.7	702.8
35°	632.7	641.4	670.6	674.3	671.7
37.5°	598.7	606.6	634.1	642.4	640.3
40°	562.9	571.6	593.3	608.1	608.8
42.5°	527.5	535.8	553.5	574.8	574.8
45°	489.9	498.2	514.5	538.0	540.8
47.5°	453.0	461.7	477.6	501.1	505.8
50°	416.8	424.8	440.7	463.5	470.7
52.5°	379.2	387.9	403.5	424.4	434.9
55°	343.1	348.9	365.9	386.1	397.3
57.5°	305.5	310.9	330.1	347.4	359.0
60°	269.3	276.2	291.0	308.7	322.1
62.5°	234.6	241.9	254.5	270.1	285.2
65°	201.0	206.4	218.7	234.3	247.6
67.5°	168.5	173.2	185.5	196.3	210.4
70°	135.6	141.7	150.8	161.2	170.3
72.5°	109.2	111.7	119.3	126.9	136.3
75°	80.6	85.0	91.1	95.4	100.9
77.5°	57.8	60.4	64.0	67.6	72.7
80°	38.7	39.8	43.0	43.7	47.7
82.5°	23.5	24.2	24.9	25.3	26.8
85°	12.7	12.7	12.7	11.9	11.9
87.5°	7.2	7.2	6.1	5.1	3.6
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)