

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: P556450

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-85-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: P556450
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-30-UNV-93-85-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

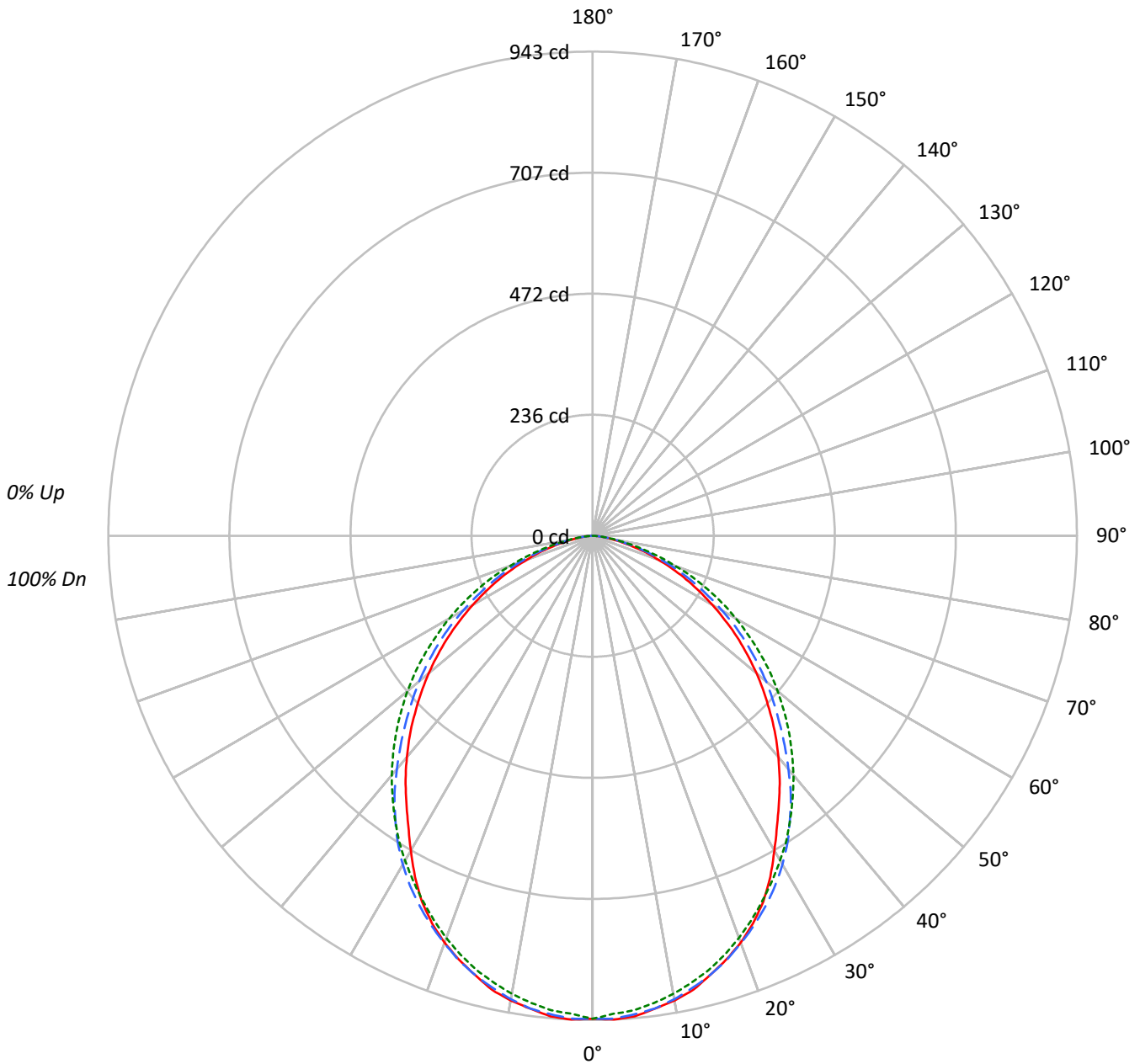
Lumens per Lamp: N/A
Luminaire Lumens: 2175.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	2531	2531	2531
5°	2538	2527	2506
10°	2511	2504	2475
15°	2466	2466	2438
20°	2414	2417	2386
25°	2335	2364	2326
30°	2199	2298	2269
35°	2077	2202	2206
40°	1976	2083	2138
45°	1863	1957	2057
50°	1744	1844	1970
55°	1609	1716	1863
60°	1449	1566	1733
65°	1279	1392	1576
70°	1066	1186	1339
75°	838	947	1048
80°	600	666	739
85°	389	389	367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.6	4.1
10°-20°	248.8	11.4
20°-30°	363.6	16.7
30°-40°	412.7	19.0
40°-50°	398.4	18.3
50°-60°	328.6	15.1
60°-70°	218.9	10.1
70°-80°	97.9	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°	700.9	32.2
0°-40°	1113.6	51.2
0°-60°	1840.7	84.6
0°-90°	2175.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2175.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	940	939	936	930	928	89
15°	885	888	885	881	875	250
25°	786	792	796	790	783	360
35°	632	641	670	674	671	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°	940.6	940.6	940.6	940.6	940.6
2.5°	943.2	943.5	941.4	935.6	932.0
5°	939.5	939.2	935.6	930.5	927.6
7.5°	929.1	929.8	928.7	921.5	917.5
10°	918.9	919.3	916.4	910.6	905.9
12.5°	905.9	905.6	901.6	898.7	891.1
15°	885.3	887.5	885.3	881.4	875.2
17.5°	865.5	865.5	866.9	860.0	855.3
20°	843.1	844.1	844.1	838.7	833.3
22.5°	817.0	820.3	821.4	815.6	809.1
25°	786.3	792.5	796.1	790.3	783.4
27.5°	749.1	758.5	769.3	765.0	757.4
30°	707.6	721.3	739.4	735.7	730.3
32.5°	668.2	681.9	706.8	705.4	702.5
35°	632.4	641.1	670.3	673.9	671.4
37.5°	598.4	606.4	633.8	642.1	640.0
40°	562.6	571.3	593.0	607.8	608.5
42.5°	527.2	535.5	553.2	574.6	574.6
45°	489.6	498.0	514.2	537.7	540.6
47.5°	452.8	461.5	477.4	500.9	505.5
50°	416.7	424.6	440.5	463.3	470.5
52.5°	379.1	387.7	403.3	424.2	434.7
55°	342.9	348.7	365.7	385.9	397.1
57.5°	305.4	310.8	329.9	347.3	358.8
60°	269.2	276.1	290.9	308.6	322.0
62.5°	234.5	241.8	254.4	269.9	285.1
65°	200.9	206.3	218.6	234.2	247.5
67.5°	168.4	173.1	185.4	196.2	210.3
70°	135.5	141.7	150.7	161.2	170.2
72.5°	109.1	111.7	119.3	126.8	136.2
75°	80.6	84.9	91.1	95.4	100.8
77.5°	57.8	60.3	64.0	67.6	72.6
80°	38.7	39.8	43.0	43.7	47.7
82.5°	23.5	24.2	24.9	25.3	26.7
85°	12.6	12.6	12.6	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)