

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: P556429

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-81-96-EDD**

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: P556429
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-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

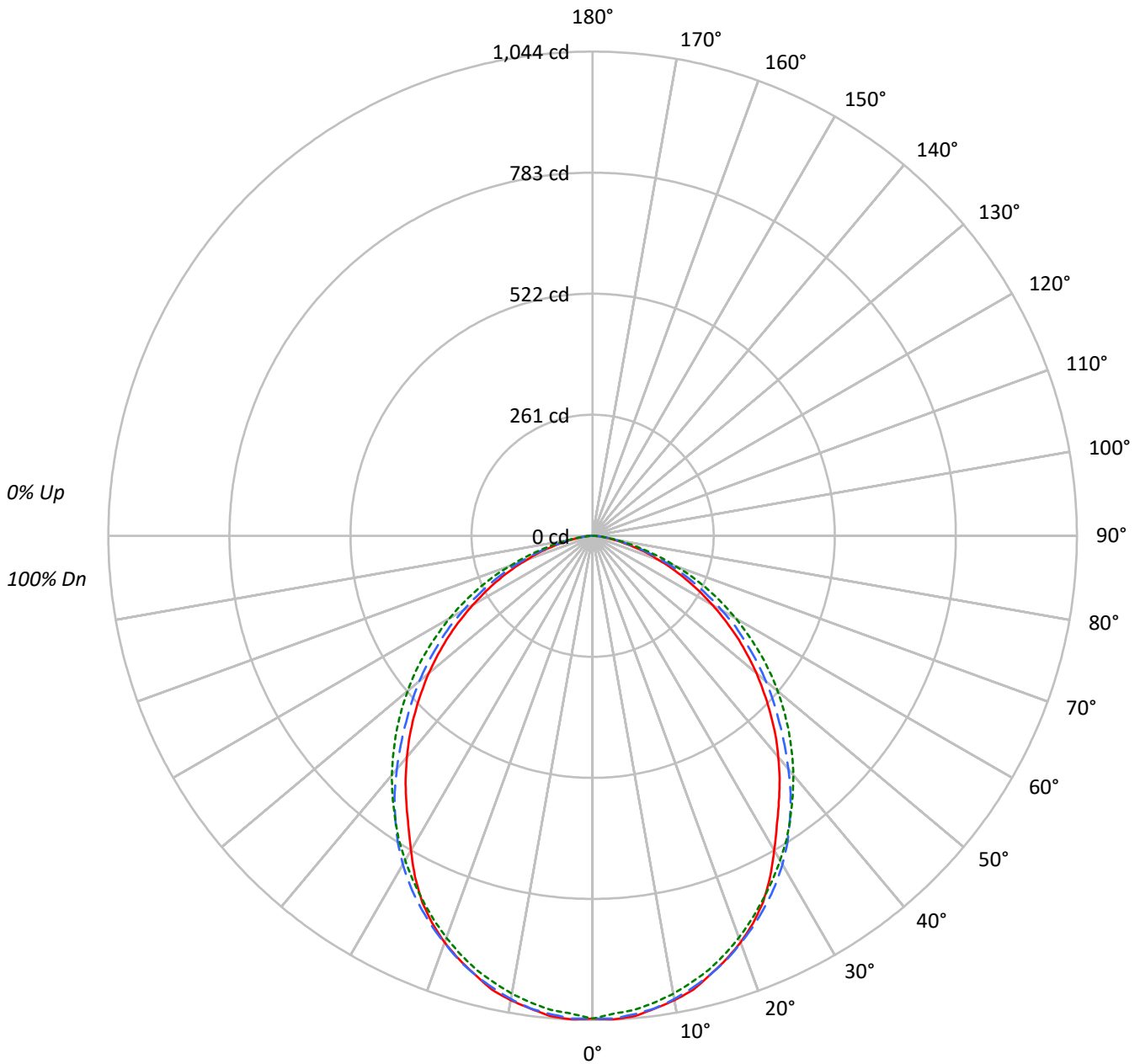
Lumens per Lamp: N/A
Luminaire Lumens: 2407.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2801	2801	2801
5°	2809	2797	2773
10°	2779	2771	2740
15°	2730	2730	2698
20°	2672	2675	2641
25°	2584	2616	2574
30°	2433	2542	2511
35°	2299	2437	2441
40°	2187	2305	2366
45°	2062	2166	2277
50°	1930	2041	2180
55°	1780	1899	2062
60°	1603	1732	1918
65°	1415	1540	1744
70°	1180	1312	1482
75°	927	1048	1160
80°	663	738	818
85°	432	432	408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	4.1
10°-20°	275.3	11.4
20°-30°	402.4	16.7
30°-40°	456.7	19.0
40°-50°	440.9	18.3
50°-60°	363.7	15.1
60°-70°	242.2	10.1
70°-80°	108.4	4.5
80°-90°	19.4	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°	775.7	32.2
0°-40°	1232.4	51.2
0°-60°	2037.0	84.6
0°-90°	2407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2407.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1040	1039	1035	1030	1027	98
15°	980	982	980	975	969	276
25°	870	877	881	875	867	399
35°	700	709	742	746	743	438
45°	542	551	569	595	598	418
55°	380	386	405	427	440	339
65°	222	228	242	259	274	220
75°	89	94	101	106	112	98
85°	14	14	14	13	13	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1041.0	1041.0	1041.0	1041.0	1041.0
2.5°	1043.8	1044.2	1041.8	1035.4	1031.4
5°	1039.8	1039.4	1035.4	1029.8	1026.6
7.5°	1028.2	1029.0	1027.8	1019.8	1015.4
10°	1017.0	1017.4	1014.2	1007.8	1002.6
12.5°	1002.6	1002.2	997.8	994.6	986.2
15°	979.8	982.2	979.8	975.4	968.6
17.5°	957.8	957.8	959.4	951.8	946.6
20°	933.0	934.2	934.2	928.2	922.2
22.5°	904.2	907.8	909.0	902.6	895.4
25°	870.2	877.0	881.0	874.6	867.0
27.5°	829.0	839.4	851.4	846.6	838.2
30°	783.0	798.2	818.2	814.2	808.2
32.5°	739.4	754.6	782.2	780.6	777.4
35°	699.8	709.4	741.8	745.8	743.0
37.5°	662.3	671.0	701.4	710.6	708.2
40°	622.7	632.3	656.3	672.6	673.4
42.5°	583.5	592.7	612.3	635.9	635.9
45°	541.9	551.1	569.1	595.1	598.3
47.5°	501.1	510.7	528.3	554.3	559.5
50°	461.1	469.9	487.5	512.7	520.7
52.5°	419.5	429.1	446.3	469.5	481.1
55°	379.5	385.9	404.7	427.1	439.5
57.5°	337.9	343.9	365.1	384.3	397.1
60°	297.9	305.5	321.9	341.5	356.3
62.5°	259.5	267.5	281.5	298.7	315.5
65°	222.3	228.3	241.9	259.1	273.9
67.5°	186.4	191.6	205.2	217.2	232.7
70°	150.0	156.8	166.8	178.4	188.4
72.5°	120.8	123.6	132.0	140.4	150.8
75°	89.2	94.0	100.8	105.6	111.6
77.5°	64.0	66.8	70.8	74.8	80.4
80°	42.8	44.0	47.6	48.4	52.8
82.5°	26.0	26.8	27.6	28.0	29.6
85°	14.0	14.0	14.0	13.2	13.2
87.5°	8.0	8.0	6.8	5.6	4.0
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)