

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: P558403

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-81-85-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: P558403
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-LD4-3STD-50-UNV-81-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

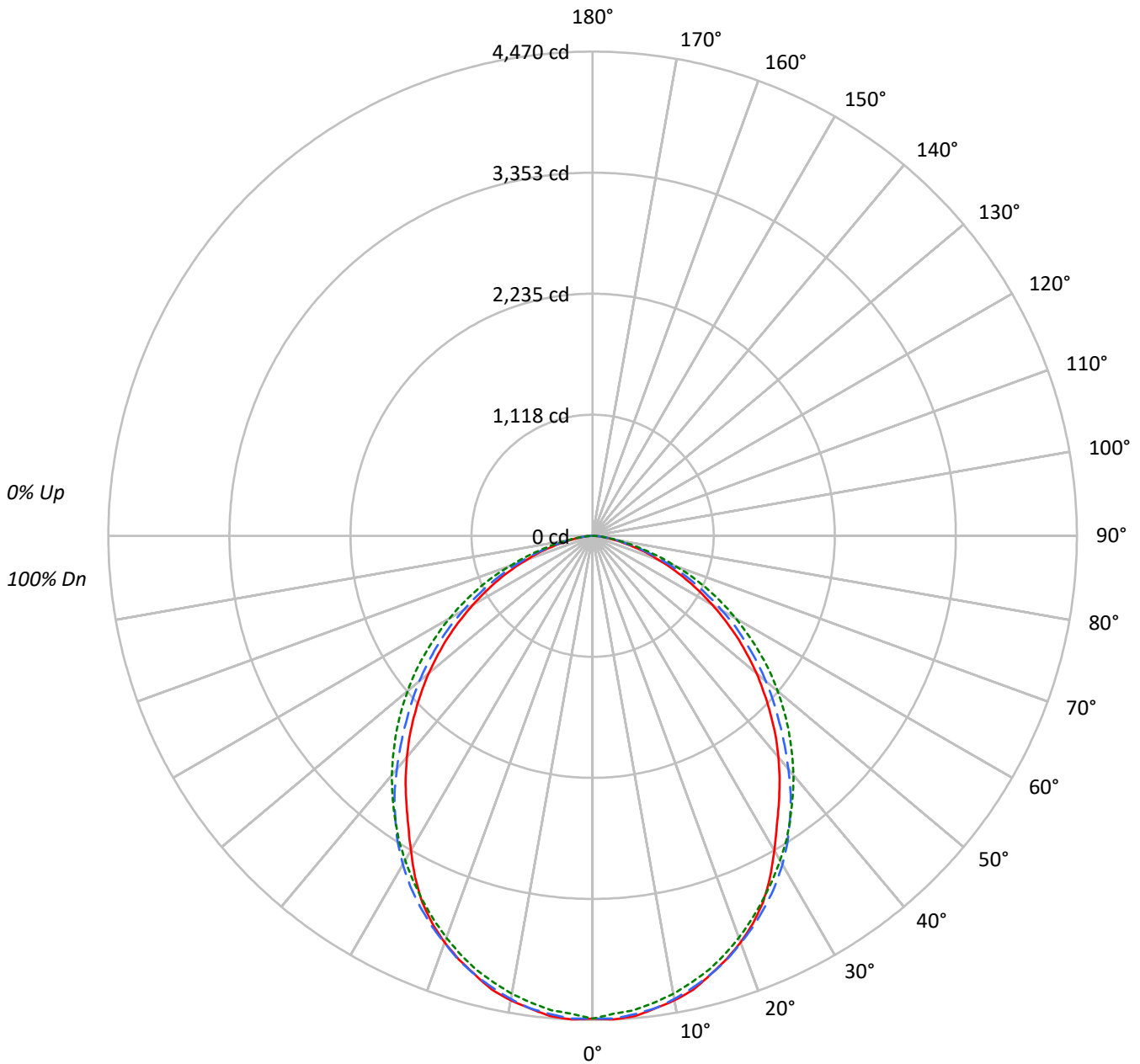
Lumens per Lamp: N/A
Luminaire Lumens: 10307.0 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
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

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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°	11995	11995	11995
5°	12027	11976	11874
10°	11899	11867	11731
15°	11688	11688	11555
20°	11441	11456	11308
25°	11064	11201	11023
30°	10419	10887	10754
35°	9845	10435	10452
40°	9366	9871	10130
45°	8831	9274	9749
50°	8266	8739	9334
55°	7624	8131	8830
60°	6866	7419	8212
65°	6062	6597	7469
70°	5053	5618	6346
75°	3971	4486	4968
80°	2839	3158	3502
85°	1849	1849	1744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	419.7	4.1
10°-20°	1179.0	11.4
20°-30°	1722.9	16.7
30°-40°	1955.7	19.0
40°-50°	1888.0	18.3
50°-60°	1557.4	15.1
60°-70°	1037.1	10.1
70°-80°	464.1	4.5
80°-90°	83.0	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°	3321.7	32.2
0°-40°	5277.4	51.2
0°-60°	8722.8	84.6
0°-90°	10307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10307.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4458	4458	4458	4458	4458	
5°	4452	4451	4434	4410	4396	421
15°	4196	4206	4196	4177	4148	1183
25°	3726	3755	3772	3745	3713	1706
35°	2997	3038	3177	3194	3182	1878
45°	2320	2360	2437	2548	2562	1790
55°	1625	1652	1733	1829	1882	1450
65°	952	978	1036	1110	1173	944
75°	382	402	432	452	478	418
85°	60	60	60	56	56	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4457.5	4457.5	4457.5	4457.5	4457.5
2.5°	4469.5	4471.2	4460.9	4433.5	4416.4
5°	4452.4	4450.7	4433.5	4409.6	4395.9
7.5°	4402.7	4406.1	4401.0	4366.8	4347.9
10°	4354.8	4356.5	4342.8	4315.4	4293.1
12.5°	4293.1	4291.4	4272.6	4258.9	4222.9
15°	4195.5	4205.8	4195.5	4176.7	4147.6
17.5°	4101.3	4101.3	4108.2	4075.6	4053.4
20°	3995.1	4000.3	4000.3	3974.6	3948.9
22.5°	3871.9	3887.3	3892.4	3865.0	3834.2
25°	3726.3	3755.4	3772.5	3745.1	3712.6
27.5°	3549.9	3594.4	3645.8	3625.3	3589.3
30°	3353.0	3418.1	3503.7	3486.6	3460.9
32.5°	3166.3	3231.4	3349.6	3342.7	3329.0
35°	2996.8	3037.9	3176.6	3193.7	3181.7
37.5°	2835.8	2873.5	3003.6	3043.0	3032.8
40°	2666.3	2707.4	2810.1	2880.3	2883.8
42.5°	2498.5	2537.9	2621.8	2722.8	2722.8
45°	2320.4	2359.8	2436.8	2548.1	2561.8
47.5°	2145.7	2186.8	2262.1	2373.5	2395.7
50°	1974.5	2012.1	2087.5	2195.4	2229.6
52.5°	1796.4	1837.5	1911.1	2010.4	2060.1
55°	1625.1	1652.5	1733.0	1828.9	1882.0
57.5°	1447.0	1472.7	1563.5	1645.7	1700.5
60°	1275.8	1308.3	1378.5	1462.4	1525.8
62.5°	1111.4	1145.6	1205.6	1279.2	1351.1
65°	952.1	977.8	1036.0	1109.7	1173.0
67.5°	798.0	820.3	878.5	929.9	996.6
70°	642.2	671.3	714.1	763.8	806.6
72.5°	517.2	529.1	565.1	601.1	645.6
75°	381.9	402.4	431.5	452.1	477.8
77.5°	274.0	286.0	303.1	320.2	344.2
80°	183.2	188.4	203.8	207.2	226.0
82.5°	111.3	114.7	118.2	119.9	126.7
85°	59.9	59.9	59.9	56.5	56.5
87.5°	34.2	34.2	29.1	24.0	17.1
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)