

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: P558410

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-81-94-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: P558410
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-81-94-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

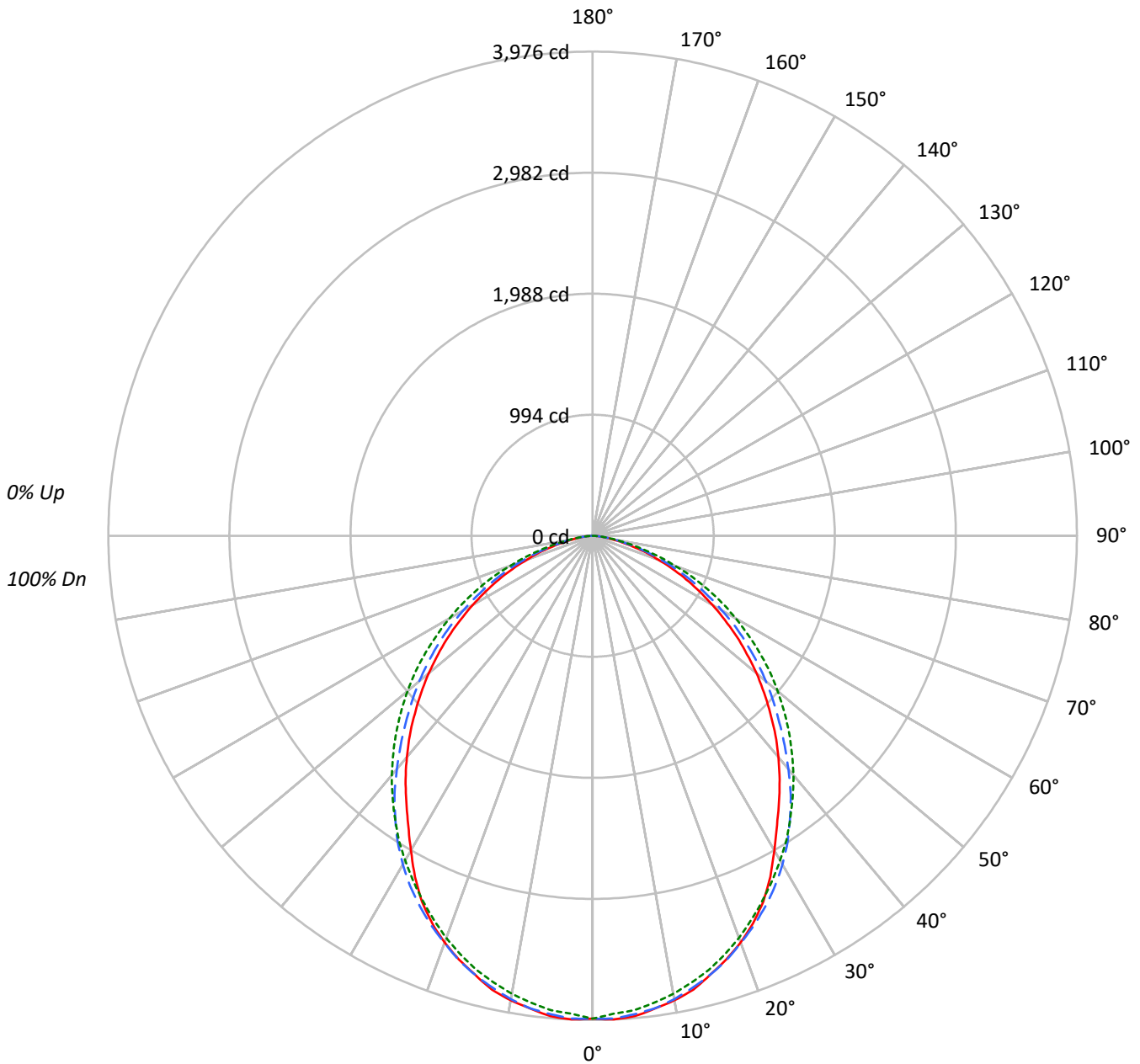
Lumens per Lamp: N/A
Luminaire Lumens: 9169.0 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				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	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°	10671	10671	10671
5°	10699	10654	10563
10°	10586	10556	10436
15°	10398	10398	10279
20°	10178	10191	10060
25°	9842	9965	9806
30°	9268	9685	9566
35°	8758	9283	9298
40°	8332	8782	9012
45°	7856	8250	8673
50°	7353	7774	8303
55°	6783	7233	7855
60°	6108	6600	7305
65°	5393	5868	6644
70°	4495	4998	5645
75°	3532	3991	4419
80°	2526	2810	3116
85°	1646	1646	1553



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.4	4.1
10°-20°	1048.8	11.4
20°-30°	1532.7	16.7
30°-40°	1739.8	19.0
40°-50°	1679.5	18.3
50°-60°	1385.5	15.1
60°-70°	922.6	10.1
70°-80°	412.9	4.5
80°-90°	73.9	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°	2954.9	32.2
0°-40°	4694.7	51.2
0°-60°	7759.7	84.6
0°-90°	9169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9169.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3965	3965	3965	3965	3965	
5°	3961	3959	3944	3923	3910	375
15°	3732	3741	3732	3716	3690	1052
25°	3315	3341	3356	3332	3303	1518
35°	2666	2702	2826	2841	2830	1670
45°	2064	2099	2168	2267	2279	1593
55°	1446	1470	1542	1627	1674	1290
65°	847	870	922	987	1044	840
75°	340	358	384	402	425	371
85°	53	53	53	50	50	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3965.4	3965.4	3965.4	3965.4	3965.4
2.5°	3976.0	3977.5	3968.4	3944.0	3928.8
5°	3960.8	3959.3	3944.0	3922.7	3910.5
7.5°	3916.6	3919.7	3915.1	3884.6	3867.9
10°	3874.0	3875.5	3863.3	3838.9	3819.1
12.5°	3819.1	3817.6	3800.8	3788.6	3756.7
15°	3732.3	3741.4	3732.3	3715.5	3689.6
17.5°	3648.5	3648.5	3654.6	3625.6	3605.8
20°	3554.0	3558.6	3558.6	3535.8	3512.9
22.5°	3444.4	3458.1	3462.6	3438.3	3410.8
25°	3314.9	3340.8	3356.0	3331.6	3302.7
27.5°	3158.0	3197.6	3243.3	3225.0	3193.0
30°	2982.8	3040.7	3116.8	3101.6	3078.7
32.5°	2816.7	2874.6	2979.7	2973.6	2961.4
35°	2665.9	2702.5	2825.9	2841.1	2830.4
37.5°	2522.7	2556.2	2672.0	2707.0	2697.9
40°	2371.9	2408.5	2499.9	2562.3	2565.4
42.5°	2222.6	2257.6	2332.3	2422.2	2422.2
45°	2064.2	2099.2	2167.8	2266.8	2279.0
47.5°	1908.8	1945.4	2012.4	2111.4	2131.2
50°	1756.5	1790.0	1857.0	1953.0	1983.4
52.5°	1598.0	1634.6	1700.1	1788.4	1832.6
55°	1445.7	1470.1	1541.7	1627.0	1674.2
57.5°	1287.3	1310.1	1390.8	1464.0	1512.7
60°	1134.9	1163.9	1226.3	1301.0	1357.3
62.5°	988.7	1019.1	1072.5	1138.0	1201.9
65°	847.0	869.8	921.6	987.1	1043.5
67.5°	709.9	729.7	781.5	827.2	886.6
70°	571.3	597.2	635.2	679.4	717.5
72.5°	460.1	470.7	502.7	534.7	574.3
75°	339.7	358.0	383.9	402.2	425.0
77.5°	243.7	254.4	269.6	284.9	306.2
80°	163.0	167.6	181.3	184.3	201.1
82.5°	99.0	102.1	105.1	106.6	112.7
85°	53.3	53.3	53.3	50.3	50.3
87.5°	30.5	30.5	25.9	21.3	15.2
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)