

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: P558303

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-82-97-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: P558303
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-35-UNV-82-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

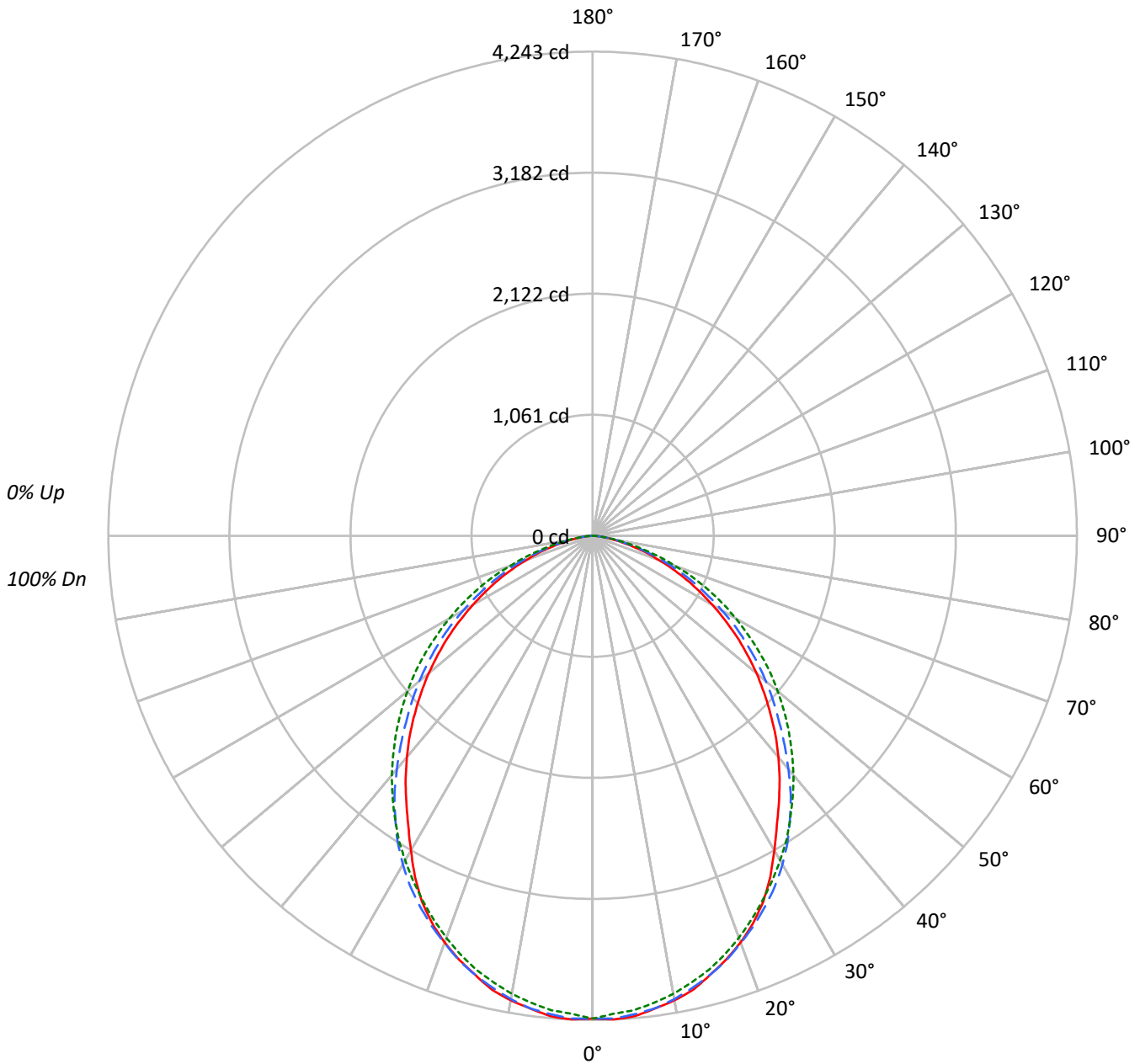
Lumens per Lamp: N/A
Luminaire Lumens: 9784.0 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	11386	11386	11386
5°	11417	11369	11272
10°	11296	11264	11136
15°	11095	11095	10968
20°	10860	10874	10735
25°	10503	10633	10464
30°	9890	10334	10208
35°	9345	9906	9922
40°	8891	9370	9616
45°	8382	8803	9255
50°	7847	8296	8861
55°	7238	7718	8382
60°	6518	7043	7795
65°	5755	6262	7090
70°	4796	5334	6024
75°	3769	4259	4715
80°	2695	2997	3326
85°	1757	1757	1655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.4	4.1
10°-20°	1119.2	11.4
20°-30°	1635.5	16.7
30°-40°	1856.5	19.0
40°-50°	1792.1	18.3
50°-60°	1478.4	15.1
60°-70°	984.5	10.1
70°-80°	440.5	4.5
80°-90°	78.8	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°	3153.1	32.2
0°-40°	5009.6	51.2
0°-60°	8280.1	84.6
0°-90°	9784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4231	4231	4231	4231	4231	
5°	4226	4225	4209	4186	4173	400
15°	3983	3992	3983	3965	3937	1123
25°	3537	3565	3581	3555	3524	1620
35°	2845	2884	3015	3032	3020	1782
45°	2203	2240	2313	2419	2432	1699
55°	1543	1569	1645	1736	1786	1377
65°	904	928	984	1053	1114	896
75°	362	382	410	429	454	396
85°	57	57	57	54	54	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4231.3	4231.3	4231.3	4231.3	4231.3
2.5°	4242.7	4244.3	4234.6	4208.6	4192.3
5°	4226.5	4224.8	4208.6	4185.8	4172.8
7.5°	4179.3	4182.6	4177.7	4145.2	4127.3
10°	4133.8	4135.4	4122.4	4096.4	4075.3
12.5°	4075.3	4073.6	4055.8	4042.8	4008.6
15°	3982.6	3992.4	3982.6	3964.7	3937.1
17.5°	3893.2	3893.2	3899.7	3868.8	3847.7
20°	3792.4	3797.3	3797.3	3772.9	3748.5
22.5°	3675.4	3690.0	3694.9	3668.9	3639.6
25°	3537.2	3564.8	3581.1	3555.1	3524.2
27.5°	3369.8	3412.0	3460.8	3441.3	3407.2
30°	3182.8	3244.6	3325.9	3309.6	3285.3
32.5°	3005.7	3067.4	3179.6	3173.1	3160.1
35°	2844.7	2883.7	3015.4	3031.7	3020.3
37.5°	2691.9	2727.7	2851.2	2888.6	2878.9
40°	2531.0	2570.0	2667.5	2734.2	2737.4
42.5°	2371.7	2409.1	2488.7	2584.6	2584.6
45°	2202.6	2240.0	2313.2	2418.8	2431.8
47.5°	2036.8	2075.8	2147.4	2253.0	2274.2
50°	1874.3	1910.0	1981.6	2084.0	2116.5
52.5°	1705.2	1744.2	1814.1	1908.4	1955.5
55°	1542.7	1568.7	1645.1	1736.1	1786.5
57.5°	1373.6	1398.0	1484.1	1562.2	1614.2
60°	1211.0	1241.9	1308.6	1388.2	1448.4
62.5°	1055.0	1087.5	1144.4	1214.3	1282.6
65°	903.8	928.2	983.5	1053.4	1113.5
67.5°	757.5	778.6	833.9	882.7	946.1
70°	609.6	637.2	677.9	725.0	765.6
72.5°	490.9	502.3	536.4	570.6	612.8
75°	362.5	382.0	409.6	429.1	453.5
77.5°	260.1	271.5	287.7	304.0	326.7
80°	173.9	178.8	193.4	196.7	214.6
82.5°	105.7	108.9	112.2	113.8	120.3
85°	56.9	56.9	56.9	53.6	53.6
87.5°	32.5	32.5	27.6	22.8	16.3
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)