

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: P557839

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-81-97-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: P557839
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-LD4-3HI-40-UNV-81-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

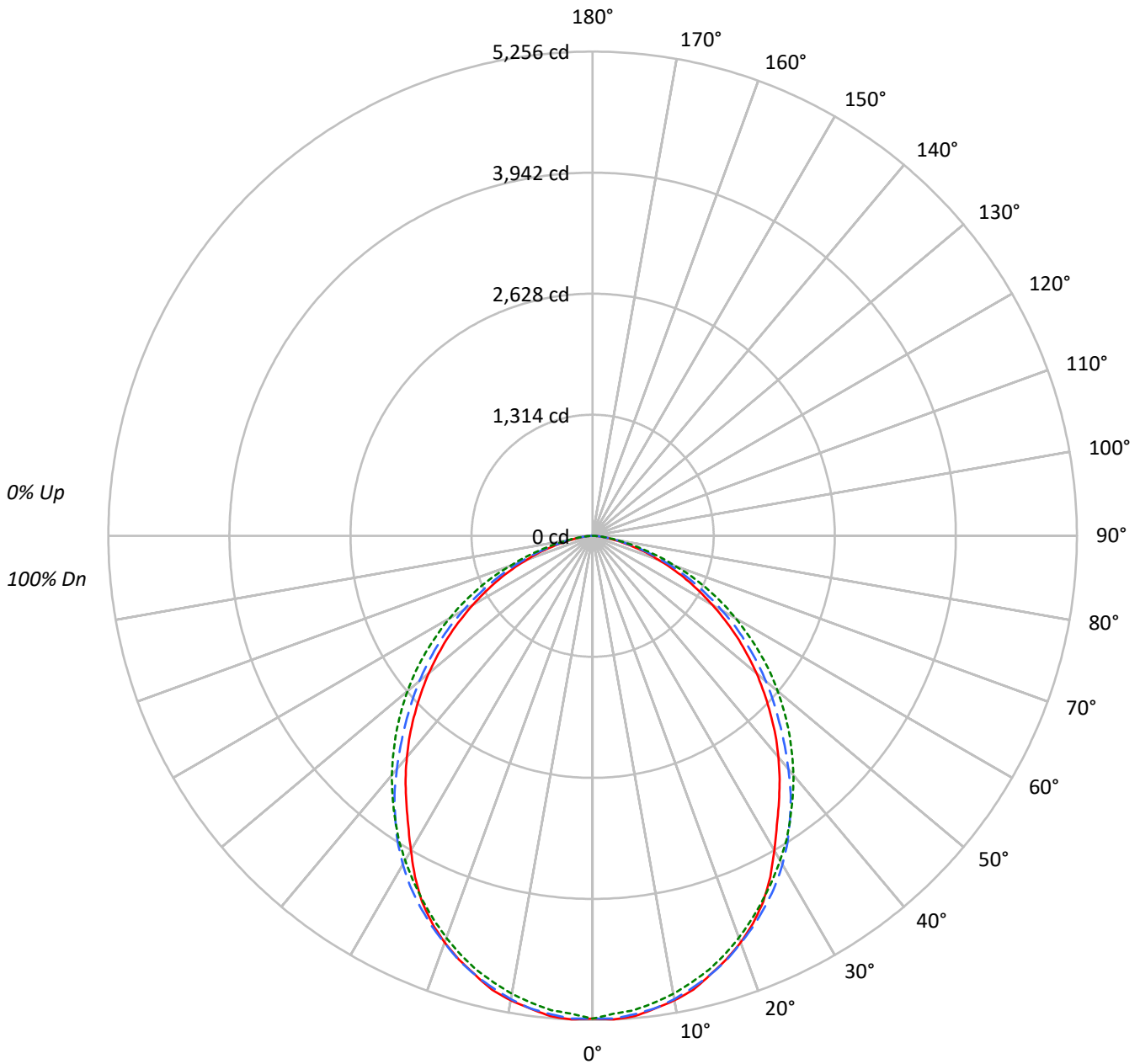
Lumens per Lamp: N/A
Luminaire Lumens: 12120.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	14105	14105	14105
5°	14142	14083	13963
10°	13993	13954	13794
15°	13744	13744	13587
20°	13453	13470	13297
25°	13010	13172	12962
30°	12251	12802	12645
35°	11576	12271	12291
40°	11014	11608	11912
45°	10384	10905	11464
50°	9720	10276	10976
55°	8966	9560	10382
60°	8074	8724	9656
65°	7129	7757	8783
70°	5941	6607	7462
75°	4668	5276	5841
80°	3340	3713	4119
85°	2177	2177	2053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	493.5	4.1
10°-20°	1386.4	11.4
20°-30°	2026.0	16.7
30°-40°	2299.7	19.0
40°-50°	2220.0	18.3
50°-60°	1831.4	15.1
60°-70°	1219.5	10.1
70°-80°	545.7	4.5
80°-90°	97.6	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°	3905.9	32.2
0°-40°	6205.7	51.2
0°-60°	10257.1	84.6
0°-90°	12120.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12120.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5242	5242	5242	5242	5242	
5°	5236	5234	5213	5185	5169	496
15°	4934	4946	4934	4911	4877	1391
25°	4382	4416	4436	4404	4366	2007
35°	3524	3572	3735	3756	3741	2208
45°	2728	2775	2866	2996	3012	2105
55°	1911	1943	2038	2151	2213	1706
65°	1120	1150	1218	1305	1379	1110
75°	449	473	507	532	562	491
85°	70	70	70	66	66	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5241.6	5241.6	5241.6	5241.6	5241.6
2.5°	5255.7	5257.7	5245.6	5213.4	5193.3
5°	5235.5	5233.5	5213.4	5185.2	5169.1
7.5°	5177.1	5181.2	5175.1	5134.9	5112.7
10°	5120.8	5122.8	5106.7	5074.5	5048.3
12.5°	5048.3	5046.3	5024.1	5008.0	4965.7
15°	4933.5	4945.6	4933.5	4911.3	4877.1
17.5°	4822.7	4822.7	4830.8	4792.5	4766.4
20°	4697.9	4703.9	4703.9	4673.7	4643.5
22.5°	4552.9	4571.0	4577.1	4544.9	4508.6
25°	4381.7	4416.0	4436.1	4403.9	4365.6
27.5°	4174.3	4226.7	4287.1	4262.9	4220.7
30°	3942.8	4019.3	4120.0	4099.8	4069.6
32.5°	3723.3	3799.8	3938.7	3930.7	3914.6
35°	3523.9	3572.3	3735.4	3755.5	3741.4
37.5°	3334.6	3378.9	3532.0	3578.3	3566.2
40°	3135.3	3183.6	3304.4	3387.0	3391.0
42.5°	2937.9	2984.3	3082.9	3201.7	3201.7
45°	2728.5	2774.8	2865.5	2996.3	3012.5
47.5°	2523.1	2571.5	2660.1	2790.9	2817.1
50°	2321.8	2366.1	2454.7	2581.5	2621.8
52.5°	2112.3	2160.7	2247.3	2364.1	2422.4
55°	1911.0	1943.2	2037.8	2150.6	2213.0
57.5°	1701.6	1731.8	1838.5	1935.1	1999.6
60°	1500.2	1538.4	1621.0	1719.7	1794.2
62.5°	1306.9	1347.1	1417.6	1504.2	1588.8
65°	1119.6	1149.8	1218.3	1304.9	1379.4
67.5°	938.4	964.5	1033.0	1093.4	1172.0
70°	755.1	789.4	839.7	898.1	948.4
72.5°	608.1	622.2	664.5	706.8	759.2
75°	449.0	473.2	507.4	531.6	561.8
77.5°	322.2	336.3	356.4	376.6	404.7
80°	215.5	221.5	239.6	243.7	265.8
82.5°	130.9	134.9	138.9	141.0	149.0
85°	70.5	70.5	70.5	66.5	66.5
87.5°	40.3	40.3	34.2	28.2	20.1
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)