

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: P556814

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-81-97-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: P556814
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-LD4-1STD-40-UNV-81-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

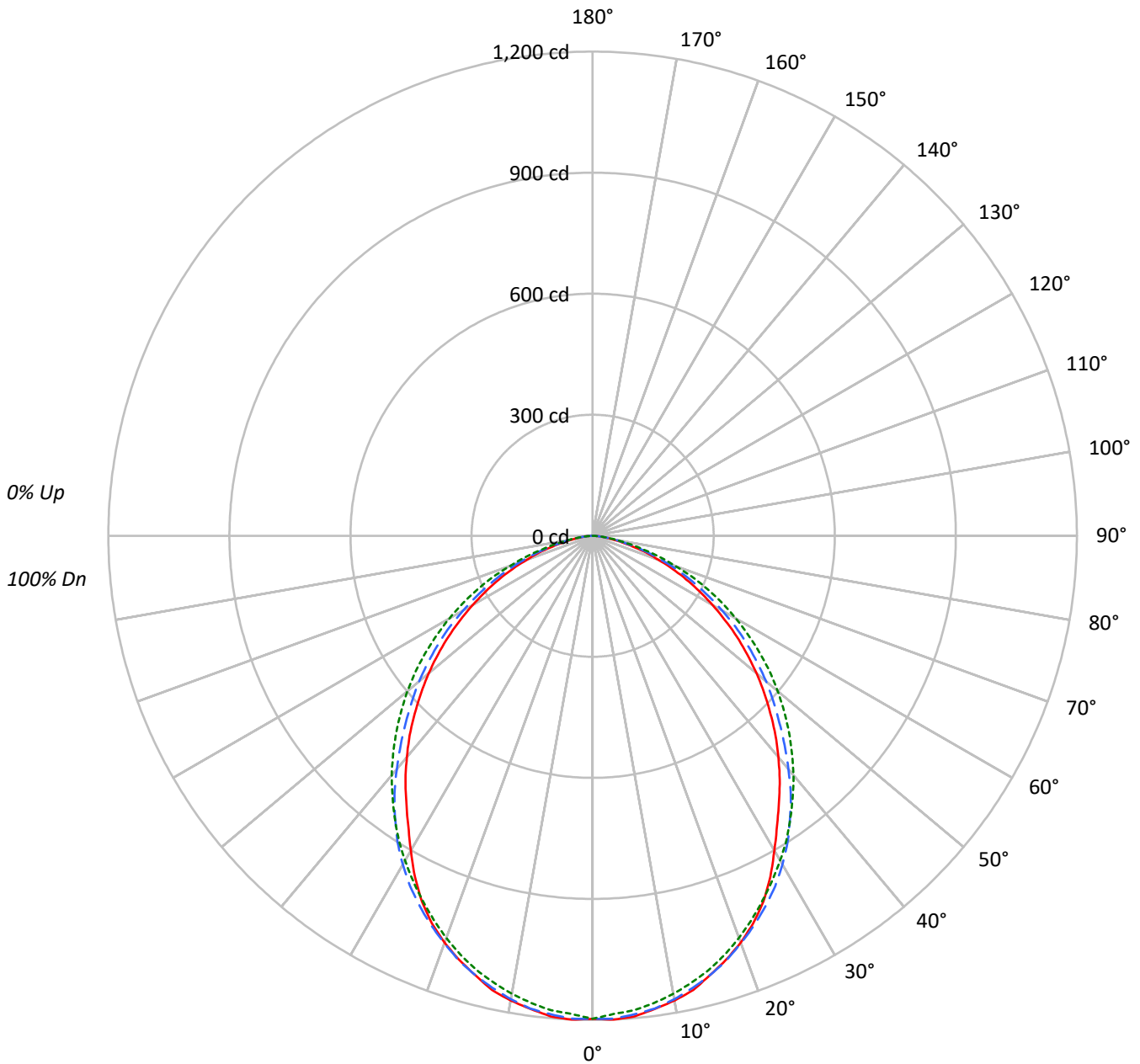
Lumens per Lamp: N/A
Luminaire Lumens: 2768.0 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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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CATALOG NUMBER: FUSL-12-4-LD4-1STD-40-UNV-81-97-EDD-90

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°	3221	3221	3221
5°	3230	3216	3189
10°	3196	3187	3150
15°	3139	3139	3103
20°	3072	3076	3037
25°	2971	3008	2960
30°	2798	2924	2888
35°	2644	2803	2807
40°	2515	2651	2721
45°	2371	2490	2618
50°	2220	2347	2507
55°	2047	2183	2371
60°	1844	1992	2206
65°	1628	1771	2006
70°	1357	1509	1704
75°	1067	1205	1334
80°	762	848	941
85°	497	497	469



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	4.1
10°-20°	316.6	11.4
20°-30°	462.7	16.7
30°-40°	525.2	19.0
40°-50°	507.0	18.3
50°-60°	418.3	15.1
60°-70°	278.5	10.1
70°-80°	124.6	4.5
80°-90°	22.3	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°	892.0	32.2
0°-40°	1417.3	51.2
0°-60°	2342.5	84.6
0°-90°	2768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2768.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1197	1197	1197	1197	1197	
5°	1196	1195	1191	1184	1180	113
15°	1127	1130	1127	1122	1114	318
25°	1001	1008	1013	1006	997	458
35°	805	816	853	858	854	504
45°	623	634	654	684	688	481
55°	436	444	465	491	505	390
65°	256	263	278	298	315	254
75°	103	108	116	121	128	112
85°	16	16	16	15	15	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1197.1	1197.1	1197.1	1197.1	1197.1
2.5°	1200.3	1200.8	1198.0	1190.7	1186.1
5°	1195.7	1195.2	1190.7	1184.2	1180.5
7.5°	1182.4	1183.3	1181.9	1172.7	1167.7
10°	1169.5	1170.0	1166.3	1158.9	1152.9
12.5°	1152.9	1152.5	1147.4	1143.7	1134.1
15°	1126.7	1129.5	1126.7	1121.7	1113.8
17.5°	1101.4	1101.4	1103.3	1094.5	1088.6
20°	1072.9	1074.3	1074.3	1067.4	1060.5
22.5°	1039.8	1043.9	1045.3	1038.0	1029.7
25°	1000.7	1008.5	1013.1	1005.8	997.0
27.5°	953.3	965.3	979.1	973.6	963.9
30°	900.5	917.9	940.9	936.3	929.4
32.5°	850.3	867.8	899.5	897.7	894.0
35°	804.8	815.8	853.1	857.7	854.5
37.5°	761.6	771.7	806.6	817.2	814.5
40°	716.0	727.1	754.7	773.5	774.5
42.5°	671.0	681.6	704.1	731.2	731.2
45°	623.1	633.7	654.4	684.3	688.0
47.5°	576.2	587.3	607.5	637.4	643.4
50°	530.3	540.4	560.6	589.6	598.8
52.5°	482.4	493.5	513.2	539.9	553.2
55°	436.4	443.8	465.4	491.2	505.4
57.5°	388.6	395.5	419.9	442.0	456.7
60°	342.6	351.4	370.2	392.7	409.8
62.5°	298.5	307.7	323.8	343.5	362.9
65°	255.7	262.6	278.2	298.0	315.0
67.5°	214.3	220.3	235.9	249.7	267.7
70°	172.5	180.3	191.8	205.1	216.6
72.5°	138.9	142.1	151.8	161.4	173.4
75°	102.6	108.1	115.9	121.4	128.3
77.5°	73.6	76.8	81.4	86.0	92.4
80°	49.2	50.6	54.7	55.6	60.7
82.5°	29.9	30.8	31.7	32.2	34.0
85°	16.1	16.1	16.1	15.2	15.2
87.5°	9.2	9.2	7.8	6.4	4.6
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)