

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: P558319

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-97-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: P558319  
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-93-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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**

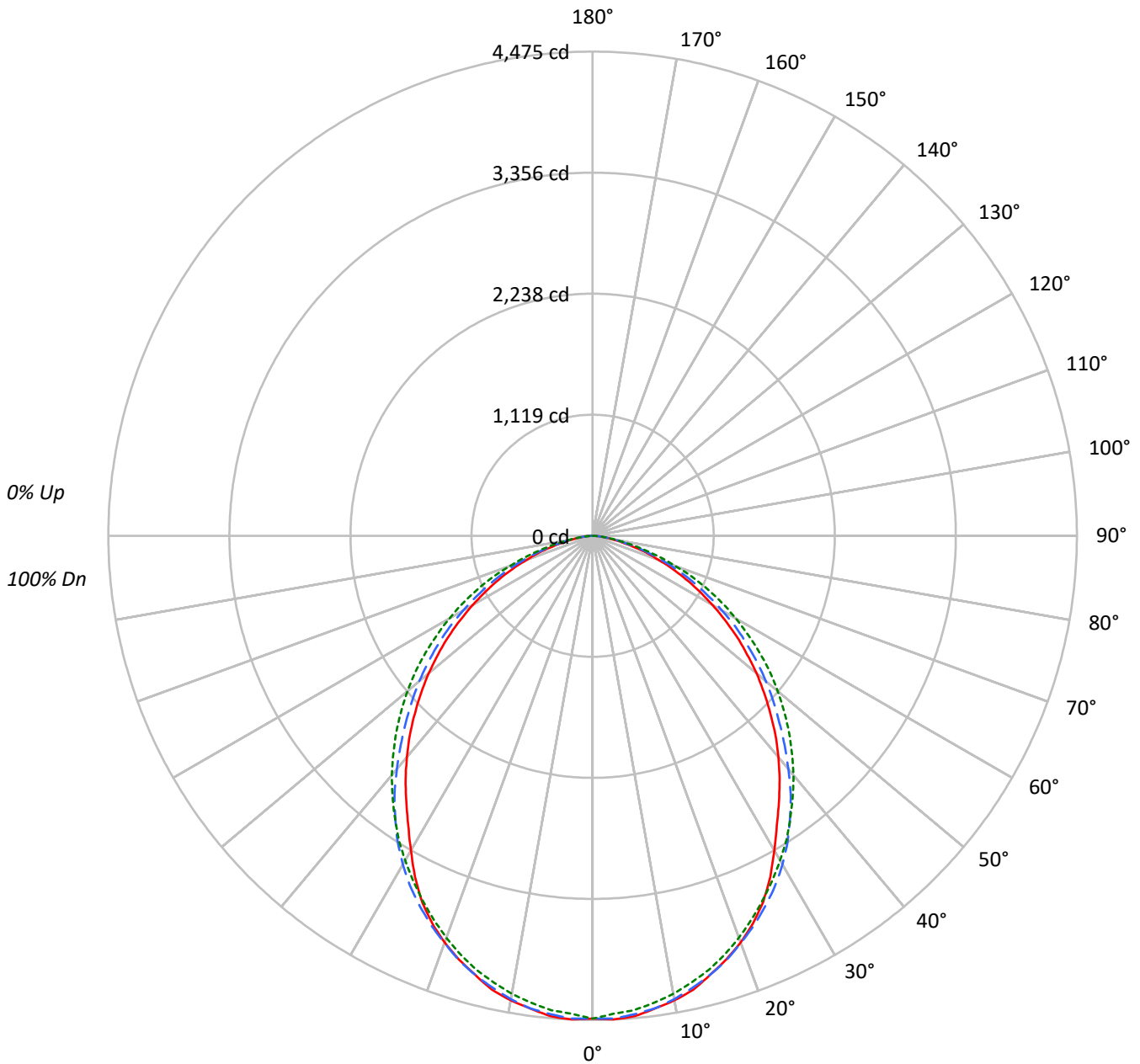
Lumens per Lamp: N/A  
Luminaire Lumens: 10319.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	12009	12009	12009
5°	12041	11990	11888
10°	11913	11880	11745
15°	11702	11702	11568
20°	11454	11469	11322
25°	11077	11214	11036
30°	10431	10900	10766
35°	9856	10448	10464
40°	9377	9883	10142
45°	8841	9285	9761
50°	8276	8749	9345
55°	7633	8140	8840
60°	6874	7428	8221
65°	6069	6604	7478
70°	5058	5625	6353
75°	3975	4492	4973
80°	2842	3161	3507
85°	1853	1853	1748



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	420.2	4.1
10°-20°	1180.4	11.4
20°-30°	1724.9	16.7
30°-40°	1958.0	19.0
40°-50°	1890.1	18.3
50°-60°	1559.2	15.1
60°-70°	1038.3	10.1
70°-80°	464.6	4.5
80°-90°	83.1	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°	3325.5	32.2
0°-40°	5283.5	51.2
0°-60°	8732.9	84.6
0°-90°	10319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10319.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4463	4463	4463	4463	4463	
5°	4458	4456	4439	4415	4401	422
15°	4200	4211	4200	4182	4152	1184
25°	3731	3760	3777	3750	3717	1708
35°	3000	3041	3180	3197	3185	1880
45°	2323	2362	2440	2551	2565	1792
55°	1627	1654	1735	1831	1884	1452
65°	953	979	1037	1111	1174	945
75°	382	403	432	453	478	418
85°	60	60	60	57	57	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4462.7	4462.7	4462.7	4462.7	4462.7
2.5°	4474.7	4476.4	4466.1	4438.7	4421.6
5°	4457.6	4455.8	4438.7	4414.7	4401.0
7.5°	4407.8	4411.3	4406.1	4371.8	4353.0
10°	4359.8	4361.5	4347.8	4320.4	4298.1
12.5°	4298.1	4296.4	4277.5	4263.8	4227.8
15°	4200.4	4210.7	4200.4	4181.5	4152.4
17.5°	4106.1	4106.1	4113.0	4080.4	4058.1
20°	3999.8	4004.9	4004.9	3979.2	3953.5
22.5°	3876.4	3891.8	3896.9	3869.5	3838.6
25°	3730.6	3759.8	3776.9	3749.5	3716.9
27.5°	3554.0	3598.6	3650.1	3629.5	3593.5
30°	3356.9	3422.0	3507.8	3490.6	3464.9
32.5°	3170.0	3235.2	3353.5	3346.6	3332.9
35°	3000.3	3041.4	3180.3	3197.4	3185.4
37.5°	2839.1	2876.8	3007.1	3046.6	3036.3
40°	2669.4	2710.5	2813.4	2883.7	2887.1
42.5°	2501.4	2540.8	2624.8	2726.0	2726.0
45°	2323.1	2362.5	2439.7	2551.1	2564.8
47.5°	2148.2	2189.3	2264.8	2376.2	2398.5
50°	1976.8	2014.5	2089.9	2197.9	2232.2
52.5°	1798.5	1839.6	1913.3	2012.8	2062.5
55°	1627.0	1654.4	1735.0	1831.0	1884.2
57.5°	1448.7	1474.4	1565.3	1647.6	1702.4
60°	1277.3	1309.8	1380.1	1464.1	1527.6
62.5°	1112.7	1147.0	1207.0	1280.7	1352.7
65°	953.2	978.9	1037.2	1111.0	1174.4
67.5°	798.9	821.2	879.5	930.9	997.8
70°	642.9	672.1	714.9	764.6	807.5
72.5°	517.8	529.8	565.8	601.8	646.3
75°	382.3	402.9	432.0	452.6	478.3
77.5°	274.3	286.3	303.5	320.6	344.6
80°	183.4	188.6	204.0	207.4	226.3
82.5°	111.4	114.9	118.3	120.0	126.9
85°	60.0	60.0	60.0	56.6	56.6
87.5°	34.3	34.3	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)