

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: P556546

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-81-85-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: P556546  
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-LD4-1LO-40-UNV-81-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

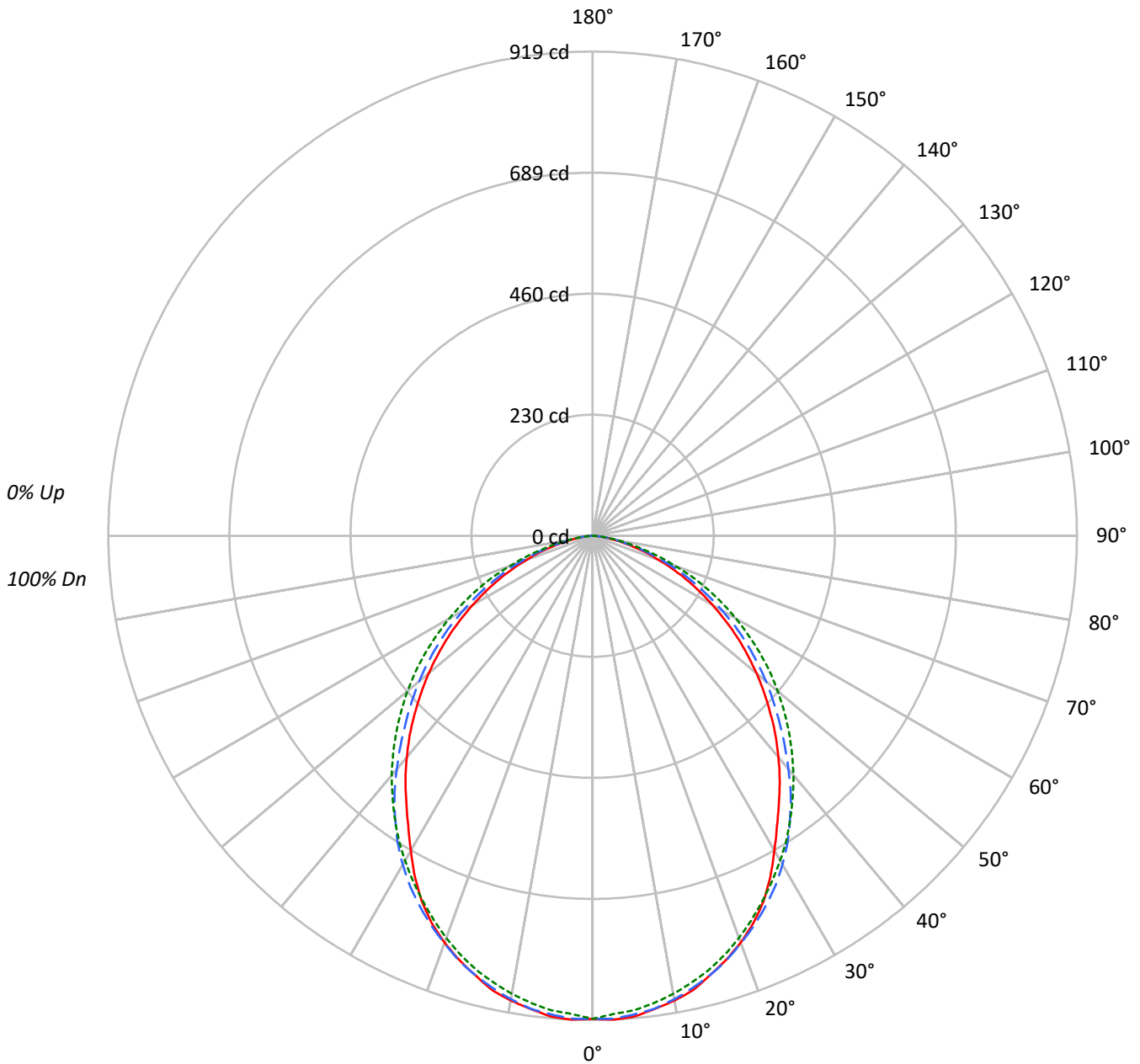
Lumens per Lamp: N/A  
Luminaire Lumens: 2120.0 lumens  
Efficiency: N/A  
Efficacy: 90.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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									
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°	2467	2467	2467
5°	2474	2463	2442
10°	2447	2441	2413
15°	2404	2404	2377
20°	2353	2356	2326
25°	2276	2304	2267
30°	2143	2239	2212
35°	2025	2146	2150
40°	1926	2030	2083
45°	1816	1907	2005
50°	1700	1798	1920
55°	1568	1673	1816
60°	1412	1526	1689
65°	1247	1357	1536
70°	1039	1156	1305
75°	816	923	1022
80°	584	649	721
85°	380	380	358



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.3	4.1
10°-20°	242.5	11.4
20°-30°	354.4	16.7
30°-40°	402.3	19.0
40°-50°	388.3	18.3
50°-60°	320.3	15.1
60°-70°	213.3	10.1
70°-80°	95.5	4.5
80°-90°	17.1	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°	683.2	32.2
0°-40°	1085.5	51.2
0°-60°	1794.1	84.6
0°-90°	2120.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2120.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	917	917	917	917	917	
5°	916	915	912	907	904	87
15°	863	865	863	859	853	243
25°	766	772	776	770	764	351
35°	616	625	653	657	654	386
45°	477	485	501	524	527	368
55°	334	340	356	376	387	298
65°	196	201	213	228	241	194
75°	78	83	89	93	98	86
85°	12	12	12	12	12	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	916.8	916.8	916.8	916.8	916.8
2.5°	919.3	919.7	917.5	911.9	908.4
5°	915.8	915.4	911.9	907.0	904.2
7.5°	905.6	906.3	905.2	898.2	894.3
10°	895.7	896.1	893.2	887.6	883.0
12.5°	883.0	882.7	878.8	876.0	868.6
15°	863.0	865.1	863.0	859.1	853.1
17.5°	843.6	843.6	845.0	838.3	833.7
20°	821.7	822.8	822.8	817.5	812.2
22.5°	796.4	799.6	800.6	795.0	788.6
25°	766.4	772.4	776.0	770.3	763.6
27.5°	730.2	739.3	749.9	745.7	738.3
30°	689.7	703.0	720.7	717.1	711.8
32.5°	651.3	664.7	689.0	687.5	684.7
35°	616.4	624.8	653.4	656.9	654.4
37.5°	583.3	591.0	617.8	625.9	623.8
40°	548.4	556.9	578.0	592.4	593.1
42.5°	513.9	522.0	539.3	560.0	560.0
45°	477.3	485.4	501.2	524.1	526.9
47.5°	441.3	449.8	465.3	488.2	492.8
50°	406.1	413.9	429.4	451.6	458.6
52.5°	369.5	377.9	393.1	413.5	423.7
55°	334.3	339.9	356.5	376.2	387.1
57.5°	297.6	302.9	321.6	338.5	349.8
60°	262.4	269.1	283.5	300.8	313.8
62.5°	228.6	235.6	248.0	263.1	277.9
65°	195.8	201.1	213.1	228.2	241.3
67.5°	164.1	168.7	180.7	191.3	205.0
70°	132.1	138.1	146.9	157.1	165.9
72.5°	106.4	108.8	116.2	123.6	132.8
75°	78.5	82.8	88.8	93.0	98.3
77.5°	56.4	58.8	62.3	65.9	70.8
80°	37.7	38.7	41.9	42.6	46.5
82.5°	22.9	23.6	24.3	24.7	26.1
85°	12.3	12.3	12.3	11.6	11.6
87.5°	7.0	7.0	6.0	4.9	3.5
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)