

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: P558390

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-80-87-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: P558390  
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-50-UNV-80-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

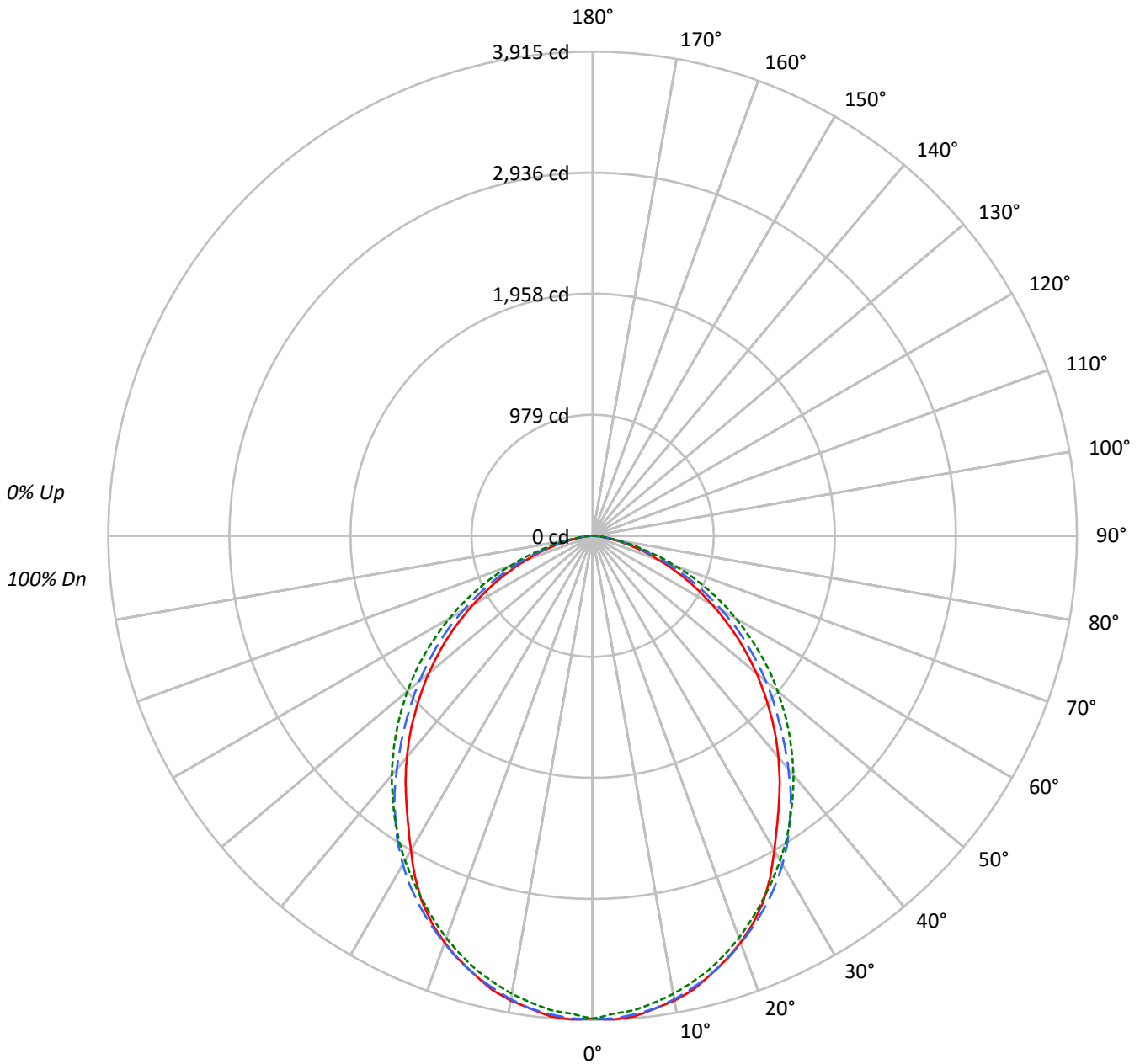
Lumens per Lamp: N/A  
Luminaire Lumens: 9029.0 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	10508	10508	10508
5°	10536	10491	10402
10°	10424	10395	10276
15°	10239	10239	10122
20°	10022	10035	9906
25°	9692	9813	9657
30°	9127	9537	9420
35°	8624	9141	9156
40°	8205	8648	8874
45°	7736	8124	8541
50°	7241	7655	8177
55°	6679	7122	7735
60°	6015	6499	7194
65°	5311	5779	6543
70°	4426	4921	5559
75°	3478	3930	4351
80°	2487	2766	3068
85°	1621	1621	1528



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	367.6	4.1
10°-20°	1032.8	11.4
20°-30°	1509.3	16.7
30°-40°	1713.2	19.0
40°-50°	1653.9	18.3
50°-60°	1364.3	15.1
60°-70°	908.5	10.1
70°-80°	406.5	4.5
80°-90°	72.7	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°	2909.8	32.2
0°-40°	4623.0	51.2
0°-60°	7641.2	84.6
0°-90°	9029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9029.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3905	3905	3905	3905	3905	
5°	3900	3899	3884	3863	3851	369
15°	3675	3684	3675	3659	3633	1036
25°	3264	3290	3305	3281	3252	1495
35°	2625	2661	2783	2798	2787	1645
45°	2033	2067	2135	2232	2244	1568
55°	1424	1448	1518	1602	1649	1271
65°	834	857	908	972	1028	827
75°	334	352	378	396	418	366
85°	52	52	52	50	50	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3904.8	<i>3904.8</i>	3904.8	3904.8	3904.8
2.5°	<i>3915.3</i>	<i>3916.8</i>	<i>3907.8</i>	<i>3883.8</i>	<i>3868.8</i>
5°	3900.3	<i>3898.8</i>	3883.8	3862.8	3850.8
7.5°	3856.8	<i>3859.8</i>	3855.3	3825.3	3808.8
10°	3814.8	<i>3816.3</i>	3804.3	3780.3	3760.8
12.5°	3760.8	<i>3759.3</i>	3742.8	3730.8	3699.3
15°	3675.3	<i>3684.3</i>	3675.3	3658.8	3633.3
17.5°	3592.8	<i>3592.8</i>	3598.8	3570.3	3550.8
20°	3499.8	<i>3504.3</i>	3504.3	3481.8	3459.3
22.5°	3391.8	<i>3405.3</i>	3409.8	3385.8	3358.8
25°	3264.3	<i>3289.8</i>	3304.8	3280.8	3252.3
27.5°	3109.7	<i>3148.7</i>	3193.8	3175.8	3144.2
30°	2937.2	<i>2994.2</i>	3069.2	3054.2	3031.7
32.5°	2773.7	<i>2830.7</i>	2934.2	2928.2	2916.2
35°	2625.2	<i>2661.2</i>	2782.7	2797.7	2787.2
37.5°	2484.2	<i>2517.2</i>	2631.2	2665.7	2656.7
40°	2335.7	<i>2371.7</i>	2461.7	2523.2	2526.2
42.5°	2188.7	<i>2223.2</i>	2296.7	2385.2	2385.2
45°	2032.7	<i>2067.2</i>	2134.7	2232.2	2244.2
47.5°	1879.6	<i>1915.7</i>	1981.7	2079.2	2098.7
50°	1729.6	<i>1762.6</i>	1828.6	1923.2	1953.2
52.5°	1573.6	<i>1609.6</i>	1674.1	1761.1	1804.6
55°	1423.6	<i>1447.6</i>	1518.1	1602.1	1648.6
57.5°	1267.6	<i>1290.1</i>	1369.6	1441.6	1489.6
60°	1117.6	<i>1146.1</i>	1207.6	1281.1	1336.6
62.5°	973.6	<i>1003.6</i>	1056.1	1120.6	1183.6
65°	834.1	<i>856.6</i>	907.6	972.1	1027.6
67.5°	699.1	<i>718.6</i>	769.6	814.6	873.1
70°	562.5	<i>588.0</i>	625.5	669.1	706.6
72.5°	453.0	<i>463.5</i>	495.0	526.5	565.5
75°	334.5	<i>352.5</i>	378.0	396.0	418.5
77.5°	240.0	<i>250.5</i>	265.5	280.5	301.5
80°	160.5	<i>165.0</i>	178.5	181.5	198.0
82.5°	97.5	<i>100.5</i>	103.5	105.0	111.0
85°	52.5	<i>52.5</i>	52.5	49.5	49.5
87.5°	30.0	<i>30.0</i>	25.5	21.0	15.0
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)