

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: P546761

Luminaire Tested: **FMR-24-4-LD4-2HI-50-UNV-82-86-EDD**

Issue Date: 6/15/2021

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: P546761
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-2HI-50-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

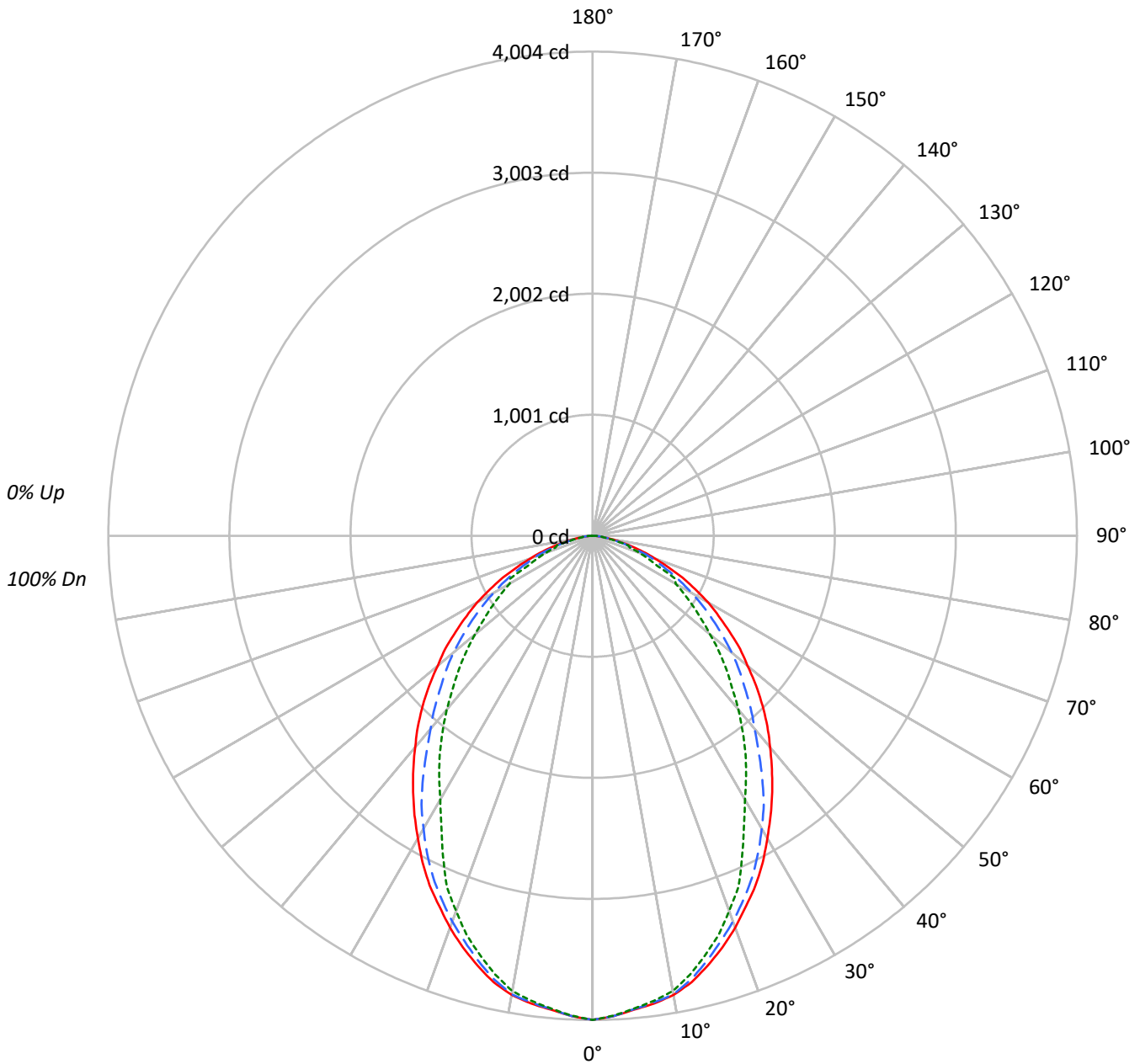
Lumens per Lamp: N/A
Luminaire Lumens: 7860.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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

TEST NUMBER: P546761

CATALOG NUMBER: FMR-24-4-LD4-2HI-50-UNV-82-86-EDD

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	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5387	5387	5387
5°	5314	5308	5301
10°	5268	5261	5224
15°	5126	5074	5003
20°	4937	4858	4725
25°	4734	4631	4343
30°	4487	4344	3912
35°	4250	4014	3619
40°	4008	3658	3293
45°	3778	3382	2977
50°	3498	3139	2655
55°	3236	2845	2378
60°	2964	2541	2130
65°	2608	2225	1886
70°	2149	1948	1602
75°	1708	1492	1564
80°	1148	1076	1004
85°	715	857	1000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.7	4.7
10°-20°	1022.8	13.0
20°-30°	1416.1	18.0
30°-40°	1509.9	19.2
40°-50°	1377.5	17.5
50°-60°	1079.1	13.7
60°-70°	703.3	8.9
70°-80°	311.6	4.0
80°-90°	66.9	0.9
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°	2811.6	35.8
0°-40°	4321.5	55.0
0°-60°	6778.1	86.2
0°-90°	7860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4004	4004	4004	4004	4004	
5°	3934	3930	3930	3925	3925	373
15°	3680	3680	3643	3606	3592	1034
25°	3189	3171	3120	3009	2925	1464
35°	2587	2569	2444	2259	2203	1618
45°	1986	1944	1777	1629	1564	1530
55°	1379	1338	1213	1069	1014	1237
65°	819	773	699	713	592	807
75°	329	306	287	273	301	352
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4003.8	4003.8	4003.8	4003.8	4003.8
2.5°	3976.0	3976.0	3976.0	3971.4	3971.4
5°	3934.3	3929.7	3929.7	3925.1	3925.1
7.5°	3901.9	3897.3	3892.7	3888.1	3878.8
10°	3855.7	3855.7	3851.0	3827.9	3823.3
12.5°	3781.6	3777.0	3758.5	3726.1	3716.8
15°	3679.8	3679.8	3642.7	3605.7	3591.8
17.5°	3568.7	3564.1	3517.8	3480.7	3462.2
20°	3448.3	3439.1	3392.8	3332.6	3300.2
22.5°	3314.1	3314.1	3258.6	3179.9	3147.5
25°	3189.1	3170.6	3119.7	3008.6	2925.3
27.5°	3045.6	3017.9	2962.3	2805.0	2707.8
30°	2888.3	2874.4	2795.7	2592.0	2518.0
32.5°	2740.2	2717.0	2633.7	2420.8	2360.6
35°	2587.4	2568.9	2443.9	2258.8	2203.2
37.5°	2434.7	2411.5	2254.2	2106.0	2036.6
40°	2281.9	2254.2	2082.9	1948.7	1874.6
42.5°	2138.4	2101.4	1934.8	1791.3	1708.0
45°	1985.7	1944.0	1777.4	1629.3	1564.5
47.5°	1832.9	1795.9	1643.2	1490.4	1416.4
50°	1670.9	1638.5	1499.7	1346.9	1268.2
52.5°	1536.7	1485.8	1351.6	1198.8	1134.0
55°	1379.3	1337.7	1212.7	1069.2	1013.7
57.5°	1235.8	1194.2	1078.5	944.2	898.0
60°	1101.6	1041.4	944.2	828.5	791.5
62.5°	953.5	907.2	823.9	726.7	773.0
65°	819.3	773.0	698.9	712.8	592.5
67.5°	671.2	648.0	583.2	518.4	499.9
70°	546.2	518.4	495.3	425.8	407.3
72.5°	435.1	407.3	374.9	337.9	324.0
75°	328.6	305.5	287.0	273.1	300.9
77.5°	226.8	217.5	203.7	189.8	185.1
80°	148.1	143.5	138.9	134.2	129.6
82.5°	87.9	87.9	87.9	87.9	87.9
85°	46.3	50.9	55.5	60.2	64.8
87.5°	27.8	27.8	32.4	37.0	41.7
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)