

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: P547325

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-80-96-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: P547325  
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-LD4-4HI-50-UNV-80-96-EDD  
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

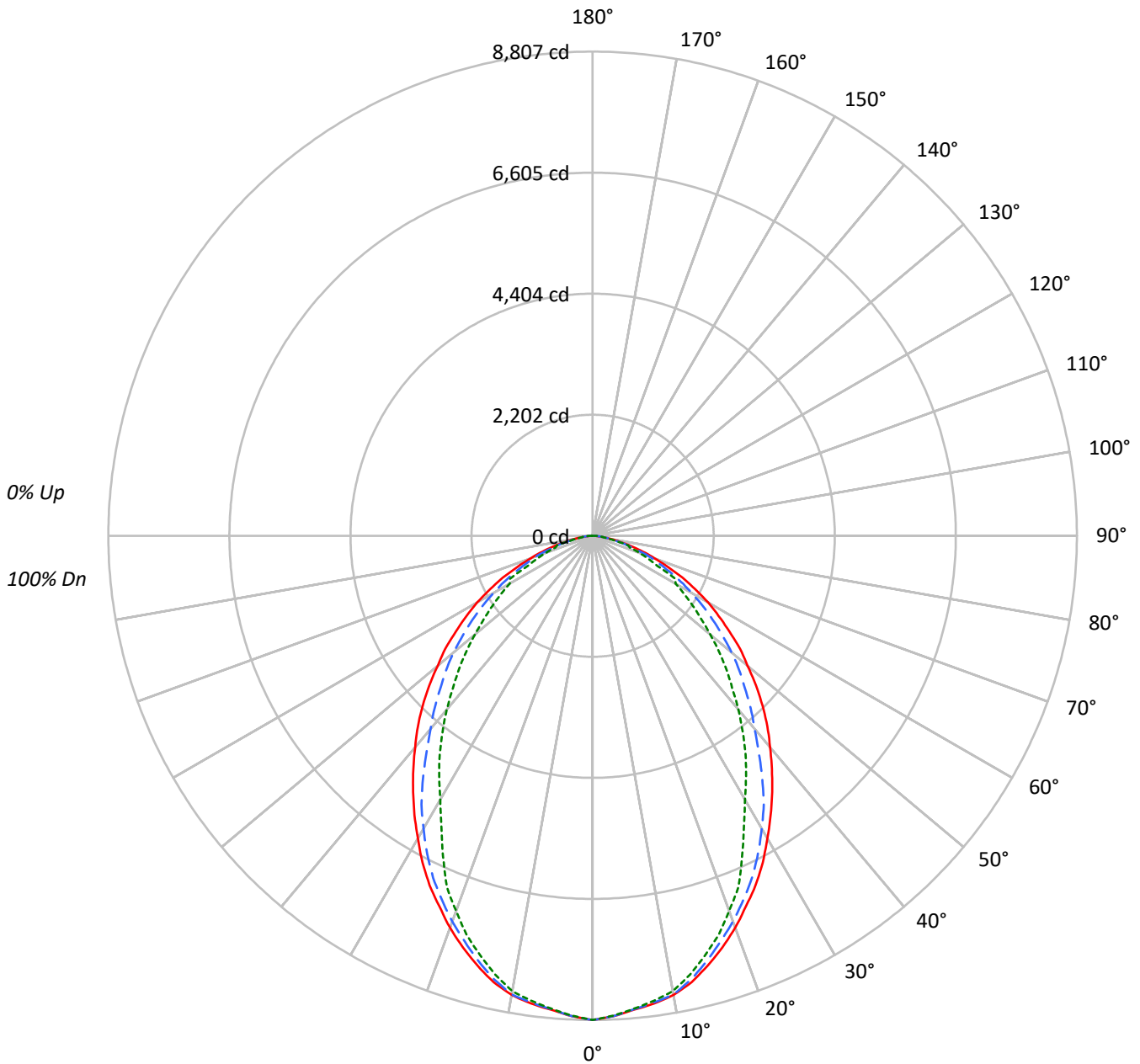
Lumens per Lamp: N/A  
Luminaire Lumens: 17290.0 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 172.8  
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				20				
RC	80				70				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11850	11850	11850
5°	11689	11675	11662
10°	11588	11574	11490
15°	11275	11162	11006
20°	10861	10686	10395
25°	10415	10188	9553
30°	9871	9555	8605
35°	9349	8830	7961
40°	8816	8048	7243
45°	8311	7440	6549
50°	7694	6905	5840
55°	7118	6258	5231
60°	6521	5589	4685
65°	5738	4895	4149
70°	4727	4286	3525
75°	3758	3282	3440
80°	2524	2367	2209
85°	1572	1886	2200



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	819.8	4.7
10°-20°	2250.0	13.0
20°-30°	3115.0	18.0
30°-40°	3321.4	19.2
40°-50°	3030.1	17.5
50°-60°	2373.9	13.7
60°-70°	1547.2	8.9
70°-80°	685.5	4.0
80°-90°	147.2	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°	6184.8	35.8
0°-40°	9506.2	55.0
0°-60°	14910.2	86.2
0°-90°	17290.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17290.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8807	8807	8807	8807	8807	
5°	8655	8644	8644	8634	8634	822
15°	8095	8095	8013	7932	7901	2276
25°	7015	6975	6863	6618	6435	3221
35°	5692	5651	5376	4969	4847	3558
45°	4368	4276	3910	3584	3442	3365
55°	3034	2943	2668	2352	2230	2721
65°	1802	1700	1538	1568	1303	1776
75°	723	672	631	601	662	775
85°	102	112	122	132	142	141
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8807.3	8807.3	8807.3	8807.3	8807.3
2.5°	8746.2	8746.2	8746.2	8736.0	8736.0
5°	8654.6	8644.4	8644.4	8634.2	8634.2
7.5°	8583.3	8573.1	8562.9	8552.7	8532.4
10°	8481.5	8481.5	8471.3	8420.4	8410.2
12.5°	8318.6	8308.4	8267.7	8196.4	8176.0
15°	8094.6	8094.6	8013.1	7931.7	7901.1
17.5°	7850.2	7840.0	7738.2	7656.7	7616.0
20°	7585.5	7565.1	7463.3	7330.9	7259.7
22.5°	7290.2	7290.2	7168.0	6994.9	6923.7
25°	7015.3	6974.6	6862.6	6618.2	6434.9
27.5°	6699.7	6638.6	6516.4	6170.2	5956.4
30°	6353.5	6322.9	6149.8	5701.8	5538.9
32.5°	6027.7	5976.7	5793.5	5325.1	5192.7
35°	5691.7	5650.9	5376.0	4968.7	4846.6
37.5°	5355.6	5304.7	4958.6	4632.7	4480.0
40°	5019.6	4958.6	4581.8	4286.6	4123.6
42.5°	4704.0	4622.6	4256.0	3940.4	3757.1
45°	4368.0	4276.4	3909.8	3584.0	3441.5
47.5°	4032.0	3950.6	3614.6	3278.6	3115.6
50°	3675.6	3604.4	3298.9	2962.9	2789.8
52.5°	3380.4	3268.4	2973.1	2637.1	2494.6
55°	3034.2	2942.6	2667.6	2352.0	2229.8
57.5°	2718.6	2626.9	2372.4	2077.1	1975.3
60°	2423.3	2290.9	2077.1	1822.6	1741.1
62.5°	2097.5	1995.6	1812.4	1598.5	1700.4
65°	1802.2	1700.4	1537.5	1568.0	1303.3
67.5°	1476.4	1425.5	1282.9	1140.4	1099.6
70°	1201.5	1140.4	1089.5	936.7	896.0
72.5°	957.1	896.0	824.7	743.3	712.7
75°	722.9	672.0	631.3	600.7	661.8
77.5°	498.9	478.5	448.0	417.5	407.3
80°	325.8	315.6	305.5	295.3	285.1
82.5°	193.5	193.5	193.5	193.5	193.5
85°	101.8	112.0	122.2	132.4	142.5
87.5°	61.1	61.1	71.3	81.5	91.6
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)