

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: P547297

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-81-86-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: P547297
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-40-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

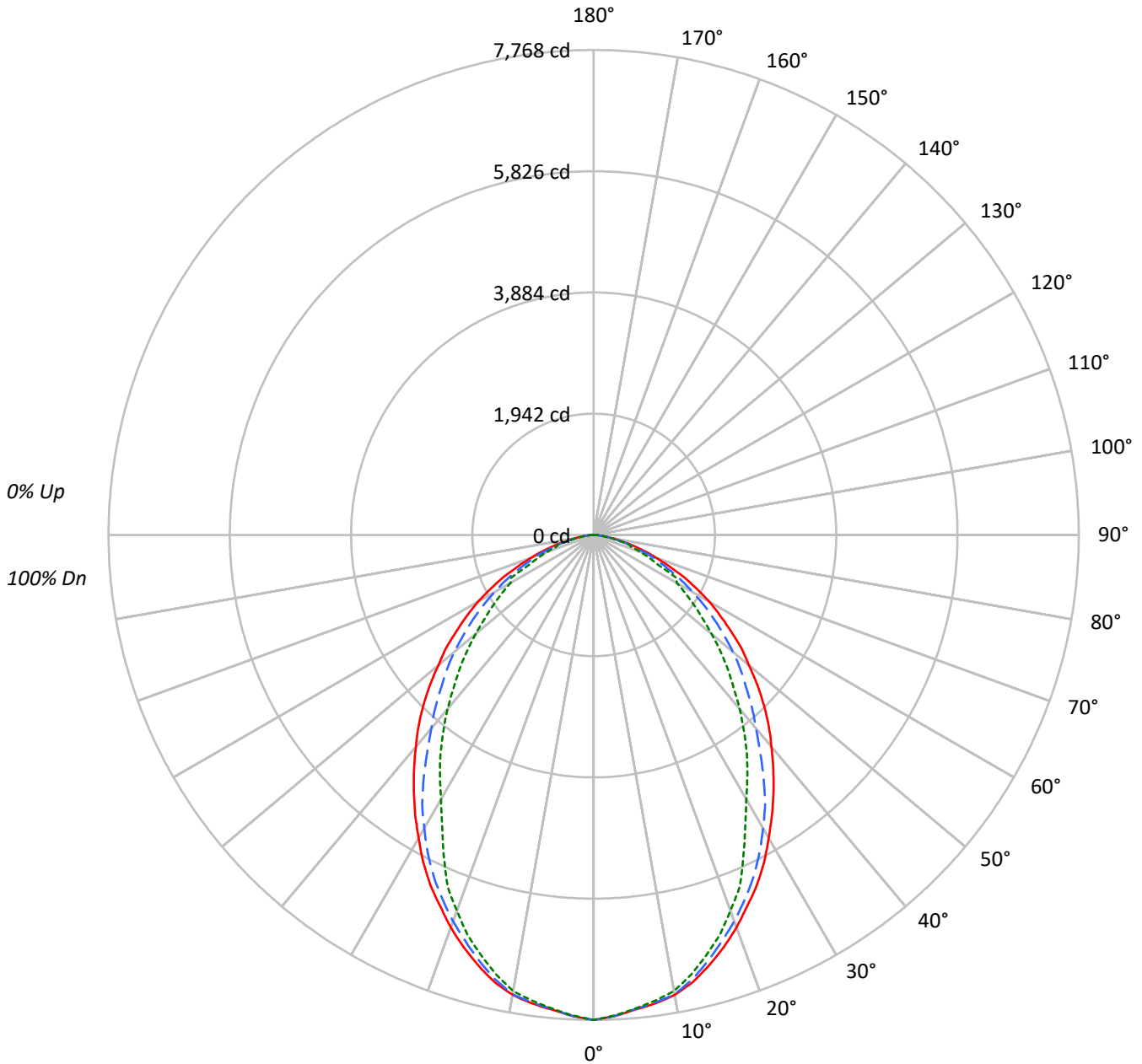
Lumens per Lamp: N/A
Luminaire Lumens: 15250.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10452	10452	10452
5°	10310	10298	10286
10°	10221	10208	10135
15°	9945	9845	9707
20°	9580	9425	9168
25°	9186	8986	8426
30°	8706	8427	7590
35°	8246	7788	7021
40°	7776	7098	6388
45°	7331	6562	5776
50°	6786	6091	5151
55°	6278	5519	4613
60°	5752	4930	4133
65°	5061	4317	3660
70°	4169	3780	3109
75°	3315	2895	3034
80°	2227	2087	1949
85°	1386	1664	1941



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	723.1	4.7
10°-20°	1984.5	13.0
20°-30°	2747.4	18.0
30°-40°	2929.6	19.2
40°-50°	2672.6	17.5
50°-60°	2093.8	13.7
60°-70°	1364.6	8.9
70°-80°	604.6	4.0
80°-90°	129.8	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°	5455.1	35.8
0°-40°	8384.6	55.0
0°-60°	13151.0	86.2
0°-90°	15250.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7768	7768	7768	7768	7768	
5°	7633	7624	7624	7616	7616	725
15°	7140	7140	7068	6996	6969	2007
25°	6188	6152	6053	5837	5676	2841
35°	5020	4984	4742	4382	4275	3138
45°	3853	3772	3448	3161	3035	2968
55°	2676	2595	2353	2074	1967	2400
65°	1590	1500	1356	1383	1150	1567
75°	638	593	557	530	584	683
85°	90	99	108	117	126	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7768.1	7768.1	7768.1	7768.1	7768.1
2.5°	7714.3	7714.3	7714.3	7705.3	7705.3
5°	7633.4	7624.5	7624.5	7615.5	7615.5
7.5°	7570.6	7561.6	7552.6	7543.6	7525.7
10°	7480.8	7480.8	7471.8	7426.9	7417.9
12.5°	7337.1	7328.1	7292.2	7229.3	7211.4
15°	7139.5	7139.5	7067.7	6995.8	6968.9
17.5°	6924.0	6915.0	6825.2	6753.3	6717.4
20°	6690.5	6672.5	6582.7	6466.0	6403.1
22.5°	6430.0	6430.0	6322.3	6169.6	6106.8
25°	6187.6	6151.7	6052.9	5837.3	5675.7
27.5°	5909.2	5855.3	5747.5	5442.2	5253.6
30°	5603.8	5576.9	5424.2	5029.1	4885.4
32.5°	5316.5	5271.6	5109.9	4696.8	4580.1
35°	5020.1	4984.2	4741.7	4382.5	4274.7
37.5°	4723.8	4678.8	4373.5	4086.1	3951.4
40°	4427.4	4373.5	4041.2	3780.8	3637.1
42.5°	4149.0	4077.2	3753.9	3475.5	3313.8
45°	3852.6	3771.8	3448.5	3161.1	3035.4
47.5°	3556.3	3484.4	3188.1	2891.7	2748.0
50°	3242.0	3179.1	2909.7	2613.3	2460.7
52.5°	2981.5	2882.7	2622.3	2326.0	2200.2
55°	2676.2	2595.4	2352.9	2074.5	1966.7
57.5°	2397.8	2317.0	2092.5	1832.0	1742.2
60°	2137.4	2020.6	1832.0	1607.5	1535.7
62.5°	1850.0	1760.2	1598.5	1409.9	1499.7
65°	1589.6	1499.7	1356.1	1383.0	1149.5
67.5°	1302.2	1257.3	1131.5	1005.8	969.9
70°	1059.7	1005.8	960.9	826.2	790.3
72.5°	844.2	790.3	727.4	655.6	628.6
75°	637.6	592.7	556.8	529.9	583.7
77.5°	440.0	422.1	395.1	368.2	359.2
80°	287.4	278.4	269.4	260.4	251.5
82.5°	170.6	170.6	170.6	170.6	170.6
85°	89.8	98.8	107.8	116.7	125.7
87.5°	53.9	53.9	62.9	71.8	80.8
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)