

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: P547307

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-82-88-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: P547307
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-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

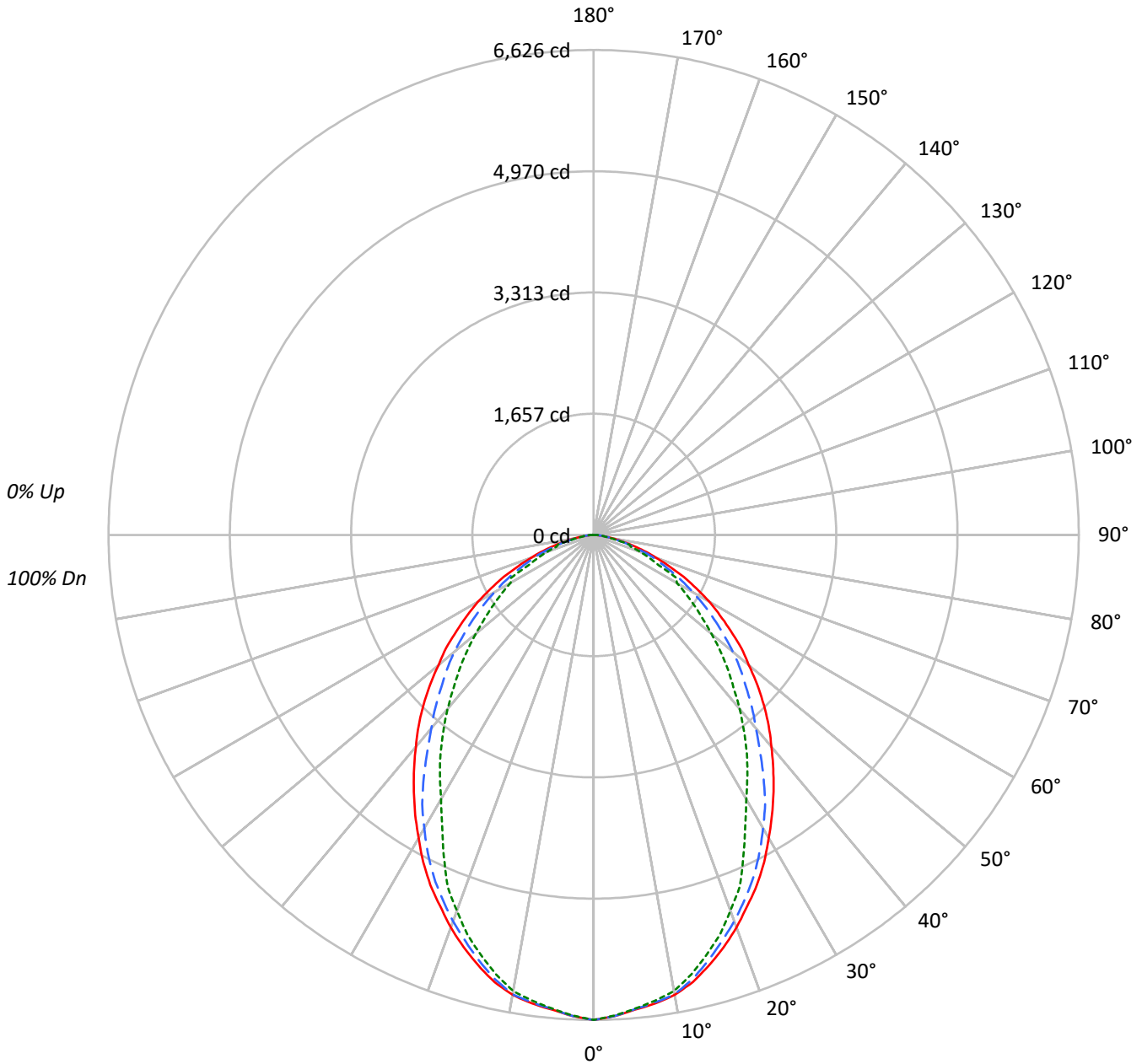
Lumens per Lamp: N/A
Luminaire Lumens: 13008.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	8915	8915	8915
5°	8794	8784	8774
10°	8718	8707	8645
15°	8483	8398	8280
20°	8171	8040	7820
25°	7835	7665	7187
30°	7426	7188	6474
35°	7034	6643	5989
40°	6633	6055	5449
45°	6253	5597	4927
50°	5788	5195	4393
55°	5355	4708	3935
60°	4906	4205	3525
65°	4317	3683	3122
70°	3556	3224	2652
75°	2828	2469	2588
80°	1899	1781	1662
85°	1183	1419	1655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	616.8	4.7
10°-20°	1692.8	13.0
20°-30°	2343.5	18.0
30°-40°	2498.9	19.2
40°-50°	2279.7	17.5
50°-60°	1786.0	13.7
60°-70°	1164.0	8.9
70°-80°	515.7	4.0
80°-90°	110.7	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°	4653.1	35.8
0°-40°	7151.9	55.0
0°-60°	11217.6	86.2
0°-90°	13008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6626	6626	6626	6626	6626	
5°	6511	6504	6504	6496	6496	618
15°	6090	6090	6029	5967	5944	1712
25°	5278	5247	5163	4979	4841	2423
35°	4282	4251	4045	3738	3646	2677
45°	3286	3217	2942	2696	2589	2531
55°	2283	2214	2007	1770	1678	2047
65°	1356	1279	1157	1180	980	1336
75°	544	506	475	452	498	583
85°	77	84	92	100	107	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6626.1	6626.1	6626.1	6626.1	6626.1
2.5°	6580.1	6580.1	6580.1	6572.5	6572.5
5°	6511.2	6503.5	6503.5	6495.9	6495.9
7.5°	6457.6	6449.9	6442.3	6434.6	6419.3
10°	6381.0	6381.0	6373.3	6335.0	6327.4
12.5°	6258.4	6250.7	6220.1	6166.5	6151.2
15°	6089.9	6089.9	6028.6	5967.3	5944.3
17.5°	5906.0	5898.4	5821.8	5760.5	5729.9
20°	5706.9	5691.6	5615.0	5515.4	5461.7
22.5°	5484.7	5484.7	5392.8	5262.6	5209.0
25°	5277.9	5247.3	5163.0	4979.2	4841.3
27.5°	5040.4	4994.5	4902.5	4642.1	4481.2
30°	4780.0	4757.0	4626.8	4289.7	4167.2
32.5°	4534.9	4496.6	4358.7	4006.3	3906.7
35°	4282.1	4251.4	4044.6	3738.2	3646.3
37.5°	4029.3	3991.0	3730.5	3485.4	3370.5
40°	3776.5	3730.5	3447.1	3225.0	3102.4
42.5°	3539.0	3477.7	3202.0	2964.5	2826.6
45°	3286.2	3217.3	2941.5	2696.4	2589.2
47.5°	3033.5	2972.2	2719.4	2466.6	2344.0
50°	2765.3	2711.7	2481.9	2229.1	2098.9
52.5°	2543.2	2458.9	2236.8	1984.0	1876.8
55°	2282.7	2213.8	2007.0	1769.5	1677.6
57.5°	2045.3	1976.3	1784.8	1562.7	1486.1
60°	1823.1	1723.6	1562.7	1371.2	1309.9
62.5°	1578.0	1501.4	1363.5	1202.7	1279.3
65°	1355.9	1279.3	1156.7	1179.7	980.5
67.5°	1110.7	1072.4	965.2	857.9	827.3
70°	903.9	857.9	819.6	704.7	674.1
72.5°	720.1	674.1	620.5	559.2	536.2
75°	543.9	505.6	474.9	452.0	497.9
77.5°	375.4	360.0	337.1	314.1	306.4
80°	245.1	237.5	229.8	222.1	214.5
82.5°	145.5	145.5	145.5	145.5	145.5
85°	76.6	84.3	91.9	99.6	107.2
87.5°	46.0	46.0	53.6	61.3	68.9
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)