

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: P546970

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-80-87-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: P546970
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-LD4-3HI-35-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

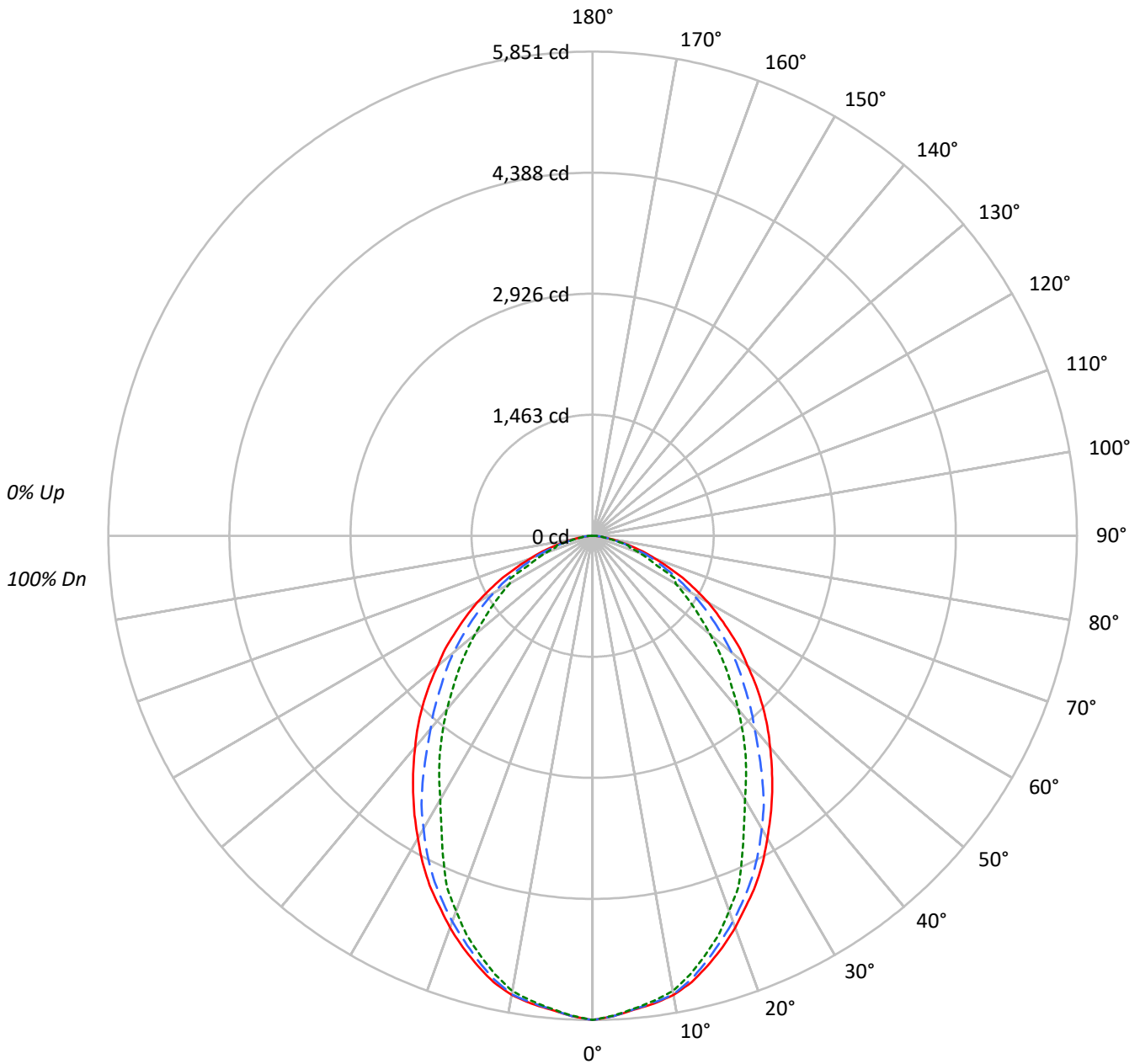
Lumens per Lamp: N/A
Luminaire Lumens: 11486.0 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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

TEST NUMBER: P546970

CATALOG NUMBER: FMR-24-4-LD4-3HI-35-UNV-80-87-EDD

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°	7872	7872	7872
5°	7765	7756	7747
10°	7698	7689	7633
15°	7490	7415	7311
20°	7215	7099	6905
25°	6919	6768	6346
30°	6557	6347	5717
35°	6210	5866	5288
40°	5857	5346	4812
45°	5521	4942	4350
50°	5111	4587	3879
55°	4728	4157	3475
60°	4332	3713	3112
65°	3812	3252	2756
70°	3140	2847	2341
75°	2496	2180	2286
80°	1677	1572	1468
85°	1044	1254	1462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	544.6	4.7
10°-20°	1494.7	13.0
20°-30°	2069.3	18.0
30°-40°	2206.5	19.2
40°-50°	2012.9	17.5
50°-60°	1577.0	13.7
60°-70°	1027.8	8.9
70°-80°	455.4	4.0
80°-90°	97.8	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°	4108.6	35.8
0°-40°	6315.1	55.0
0°-60°	9905.1	86.2
0°-90°	11486.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11486.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5851	5851	5851	5851	5851	
5°	5749	5743	5743	5736	5736	546
15°	5377	5377	5323	5269	5249	1512
25°	4660	4633	4559	4397	4275	2140
35°	3781	3754	3571	3301	3220	2364
45°	2902	2841	2597	2381	2286	2235
55°	2016	1955	1772	1562	1481	1808
65°	1197	1130	1021	1042	866	1180
75°	480	446	419	399	440	515
85°	68	74	81	88	95	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5850.8	5850.8	5850.8	5850.8	5850.8
2.5°	5810.2	5810.2	5810.2	5803.5	5803.5
5°	5749.4	5742.6	5742.6	5735.8	5735.8
7.5°	5702.0	5695.2	5688.5	5681.7	5668.2
10°	5634.4	5634.4	5627.6	5593.8	5587.0
12.5°	5526.1	5519.4	5492.3	5445.0	5431.5
15°	5377.3	5377.3	5323.2	5269.1	5248.8
17.5°	5215.0	5208.2	5140.6	5086.5	5059.4
20°	5039.1	5025.6	4958.0	4870.0	4822.7
22.5°	4843.0	4843.0	4761.8	4646.8	4599.5
25°	4660.4	4633.3	4558.9	4396.6	4274.8
27.5°	4450.7	4410.1	4328.9	4099.0	3956.9
30°	4220.7	4200.4	4085.4	3787.8	3679.6
32.5°	4004.3	3970.4	3848.7	3537.5	3449.6
35°	3781.0	3754.0	3571.4	3300.8	3219.6
37.5°	3557.8	3524.0	3294.0	3077.6	2976.1
40°	3334.6	3294.0	3043.8	2847.6	2739.4
42.5°	3124.9	3070.8	2827.3	2617.6	2495.9
45°	2901.7	2840.9	2597.4	2380.9	2286.2
47.5°	2678.5	2624.4	2401.2	2178.0	2069.8
50°	2441.8	2394.4	2191.5	1968.3	1853.3
52.5°	2245.6	2171.2	1975.1	1751.9	1657.2
55°	2015.7	1954.8	1772.2	1562.5	1481.3
57.5°	1806.0	1745.1	1576.0	1379.8	1312.2
60°	1609.8	1521.9	1379.8	1210.7	1156.6
62.5°	1393.4	1325.7	1204.0	1061.9	1129.6
65°	1197.2	1129.6	1021.4	1041.6	865.8
67.5°	980.8	947.0	852.3	757.6	730.5
70°	798.1	757.6	723.7	622.3	595.2
72.5°	635.8	595.2	547.9	493.8	473.5
75°	480.2	446.4	419.4	399.1	439.7
77.5°	331.4	317.9	297.6	277.3	270.6
80°	216.4	209.7	202.9	196.2	189.4
82.5°	128.5	128.5	128.5	128.5	128.5
85°	67.6	74.4	81.2	87.9	94.7
87.5°	40.6	40.6	47.3	54.1	60.9
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)