

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: P547003

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-80-88-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: P547003
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-40-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

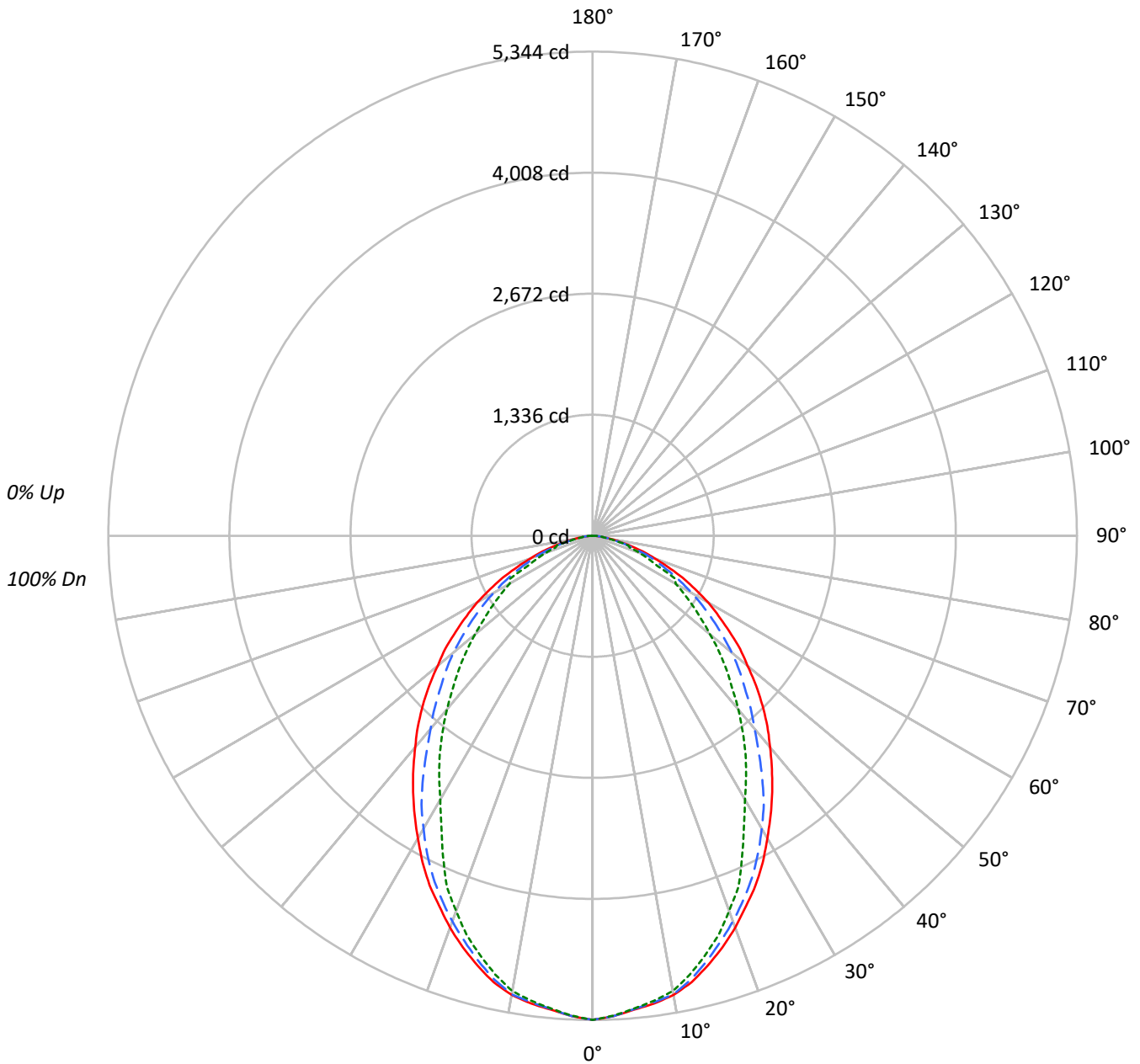
Lumens per Lamp: N/A
Luminaire Lumens: 10490.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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								
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°	7190	7190	7190
5°	7092	7084	7075
10°	7030	7022	6971
15°	6841	6772	6677
20°	6590	6483	6307
25°	6319	6181	5796
30°	5989	5797	5221
35°	5672	5357	4830
40°	5349	4882	4394
45°	5043	4514	3973
50°	4668	4190	3543
55°	4318	3797	3174
60°	3956	3391	2842
65°	3481	2970	2517
70°	2867	2600	2138
75°	2280	1991	2087
80°	1532	1436	1340
85°	954	1144	1335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	497.4	4.7
10°-20°	1365.1	13.0
20°-30°	1889.9	18.0
30°-40°	2015.2	19.2
40°-50°	1838.4	17.5
50°-60°	1440.3	13.7
60°-70°	938.7	8.9
70°-80°	415.9	4.0
80°-90°	89.3	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°	3752.3	35.8
0°-40°	5767.5	55.0
0°-60°	9046.2	86.2
0°-90°	10490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5344	5344	5344	5344	5344	
5°	5251	5245	5245	5238	5238	498
15°	4911	4911	4862	4812	4794	1381
25°	4256	4232	4164	4015	3904	1954
35°	3453	3428	3262	3015	2940	2159
45°	2650	2594	2372	2174	2088	2041
55°	1841	1785	1618	1427	1353	1651
65°	1093	1032	933	951	791	1078
75°	439	408	383	364	402	470
85°	62	68	74	80	86	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5343.5	5343.5	5343.5	5343.5	5343.5
2.5°	5306.4	5306.4	5306.4	5300.2	5300.2
5°	5250.8	5244.6	5244.6	5238.4	5238.4
7.5°	5207.6	5201.4	5195.2	5189.0	5176.7
10°	5145.8	5145.8	5139.6	5108.7	5102.5
12.5°	5046.9	5040.8	5016.1	4972.8	4960.5
15°	4911.0	4911.0	4861.6	4812.2	4793.7
17.5°	4762.8	4756.6	4694.8	4645.4	4620.7
20°	4602.2	4589.8	4528.0	4447.7	4404.5
22.5°	4423.0	4423.0	4348.9	4243.9	4200.6
25°	4256.2	4231.5	4163.6	4015.3	3904.1
27.5°	4064.7	4027.7	3953.5	3743.5	3613.8
30°	3854.7	3836.2	3731.2	3459.4	3360.5
32.5°	3657.0	3626.1	3515.0	3230.8	3150.5
35°	3453.2	3428.5	3261.7	3014.6	2940.5
37.5°	3249.3	3218.4	3008.4	2810.7	2718.1
40°	3045.5	3008.4	2779.8	2600.7	2501.9
42.5°	2854.0	2804.5	2582.2	2390.7	2279.5
45°	2650.1	2594.5	2372.1	2174.5	2088.0
47.5°	2446.3	2396.8	2193.0	1989.1	1890.3
50°	2230.0	2186.8	2001.5	1797.6	1692.6
52.5°	2050.9	1983.0	1803.8	1600.0	1513.5
55°	1840.9	1785.3	1618.5	1427.0	1352.9
57.5°	1649.4	1593.8	1439.3	1260.2	1198.4
60°	1470.2	1389.9	1260.2	1105.8	1056.3
62.5°	1272.5	1210.8	1099.6	969.9	1031.6
65°	1093.4	1031.6	932.8	951.3	790.7
67.5°	895.7	864.8	778.4	691.9	667.2
70°	728.9	691.9	661.0	568.3	543.6
72.5°	580.7	543.6	500.4	451.0	432.4
75°	438.6	407.7	383.0	364.5	401.5
77.5°	302.7	290.3	271.8	253.3	247.1
80°	197.7	191.5	185.3	179.1	173.0
82.5°	117.4	117.4	117.4	117.4	117.4
85°	61.8	68.0	74.1	80.3	86.5
87.5°	37.1	37.1	43.2	49.4	55.6
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)