

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: P547498

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-82-87-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: P547498
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-LD4-4STD-40-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

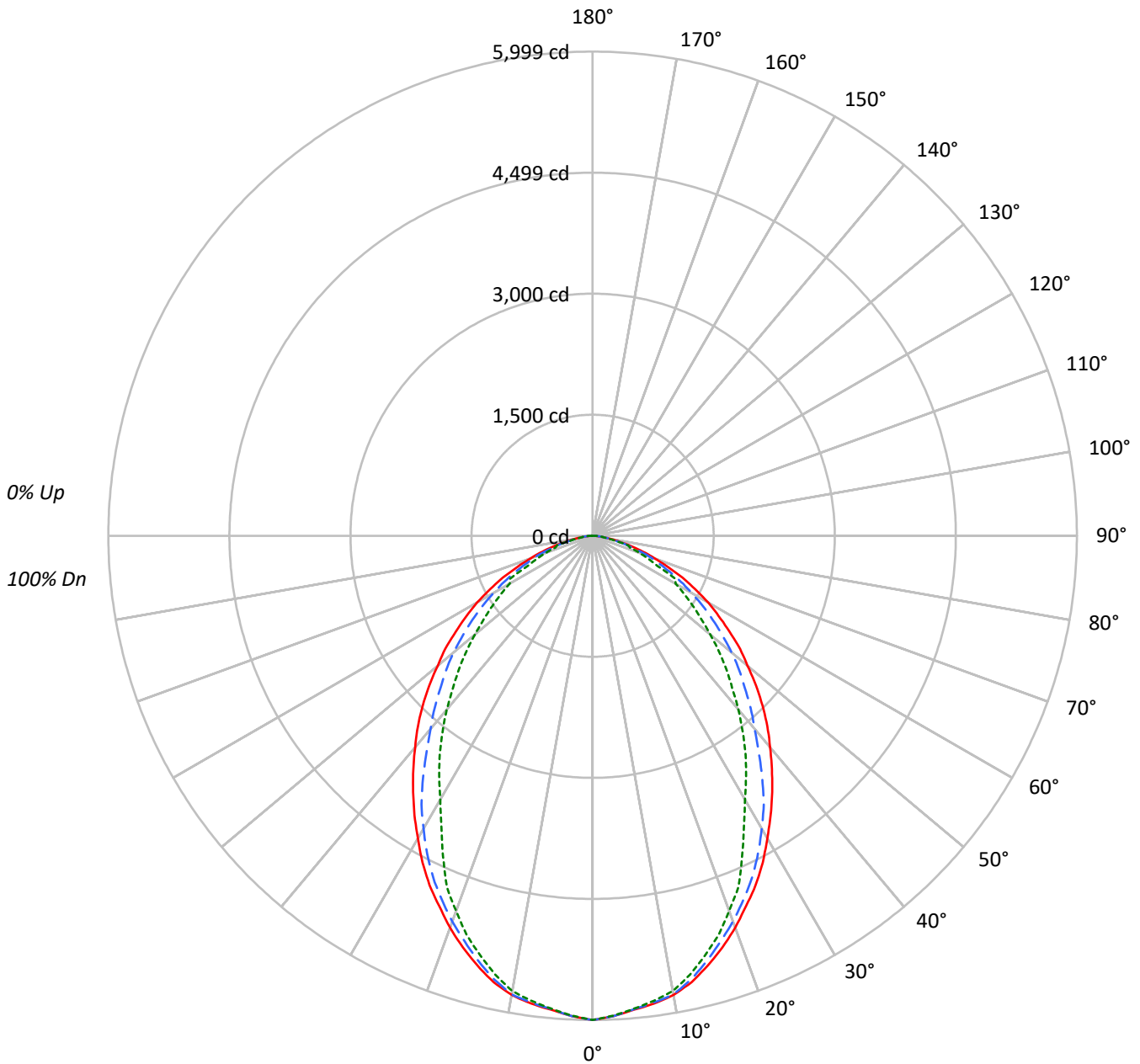
Lumens per Lamp: N/A
Luminaire Lumens: 11777.0 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8072	8072	8072
5°	7962	7953	7943
10°	7893	7884	7827
15°	7680	7603	7497
20°	7398	7279	7080
25°	7094	6940	6507
30°	6724	6508	5862
35°	6368	6015	5422
40°	6005	5482	4933
45°	5661	5068	4460
50°	5241	4703	3978
55°	4848	4263	3563
60°	4442	3807	3191
65°	3908	3334	2826
70°	3220	2919	2401
75°	2560	2235	2344
80°	1719	1612	1505
85°	1071	1284	1499



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	558.4	4.7
10°-20°	1532.6	13.0
20°-30°	2121.7	18.0
30°-40°	2262.4	19.2
40°-50°	2064.0	17.5
50°-60°	1616.9	13.7
60°-70°	1053.8	8.9
70°-80°	466.9	4.0
80°-90°	100.3	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°	4212.7	35.8
0°-40°	6475.1	55.0
0°-60°	10156.0	86.2
0°-90°	11777.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11777.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5999	5999	5999	5999	5999	
5°	5895	5888	5888	5881	5881	560
15°	5514	5514	5458	5403	5382	1550
25°	4778	4751	4674	4508	4383	2194
35°	3877	3849	3662	3384	3301	2424
45°	2975	2913	2663	2441	2344	2292
55°	2067	2004	1817	1602	1519	1854
65°	1228	1158	1047	1068	888	1210
75°	492	458	430	409	451	528
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5999.0	5999.0	5999.0	5999.0	5999.0
2.5°	5957.4	5957.4	5957.4	5950.5	5950.5
5°	5895.0	5888.1	5888.1	5881.1	5881.1
7.5°	5846.5	5839.5	5832.6	5825.7	5811.8
10°	5777.1	5777.1	5770.2	5735.5	5728.6
12.5°	5666.2	5659.2	5631.5	5582.9	5569.1
15°	5513.6	5513.6	5458.1	5402.6	5381.8
17.5°	5347.1	5340.2	5270.8	5215.4	5187.6
20°	5166.8	5152.9	5083.6	4993.4	4944.9
22.5°	4965.7	4965.7	4882.5	4764.6	4716.0
25°	4778.4	4750.7	4674.4	4508.0	4383.1
27.5°	4563.4	4521.8	4438.6	4202.8	4057.2
30°	4327.6	4306.8	4188.9	3883.8	3772.8
32.5°	4105.7	4071.0	3946.2	3627.2	3537.0
35°	3876.8	3849.1	3661.8	3384.4	3301.2
37.5°	3648.0	3613.3	3377.5	3155.6	3051.5
40°	3419.1	3377.5	3120.9	2919.8	2808.8
42.5°	3204.1	3148.6	2899.0	2684.0	2559.1
45°	2975.2	2912.8	2663.2	2441.2	2344.1
47.5°	2746.4	2690.9	2462.0	2233.2	2122.2
50°	2503.6	2455.1	2247.0	2018.2	1900.3
52.5°	2302.5	2226.2	2025.1	1796.2	1699.2
55°	2066.7	2004.3	1817.1	1602.1	1518.8
57.5°	1851.7	1789.3	1615.9	1414.8	1345.5
60°	1650.6	1560.4	1414.8	1241.4	1185.9
62.5°	1428.7	1359.3	1234.5	1088.8	1158.2
65°	1227.6	1158.2	1047.2	1068.0	887.7
67.5°	1005.6	970.9	873.8	776.8	749.0
70°	818.4	776.8	742.1	638.0	610.3
72.5°	651.9	610.3	561.8	506.3	485.5
75°	492.4	457.7	430.0	409.2	450.8
77.5°	339.8	326.0	305.2	284.3	277.4
80°	221.9	215.0	208.1	201.1	194.2
82.5°	131.8	131.8	131.8	131.8	131.8
85°	69.4	76.3	83.2	90.2	97.1
87.5°	41.6	41.6	48.5	55.5	62.4
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)