

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: P547195

Luminaire Tested: **FMR-24-4-LD4-3STD-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: P547195
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-LD4-3STD-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

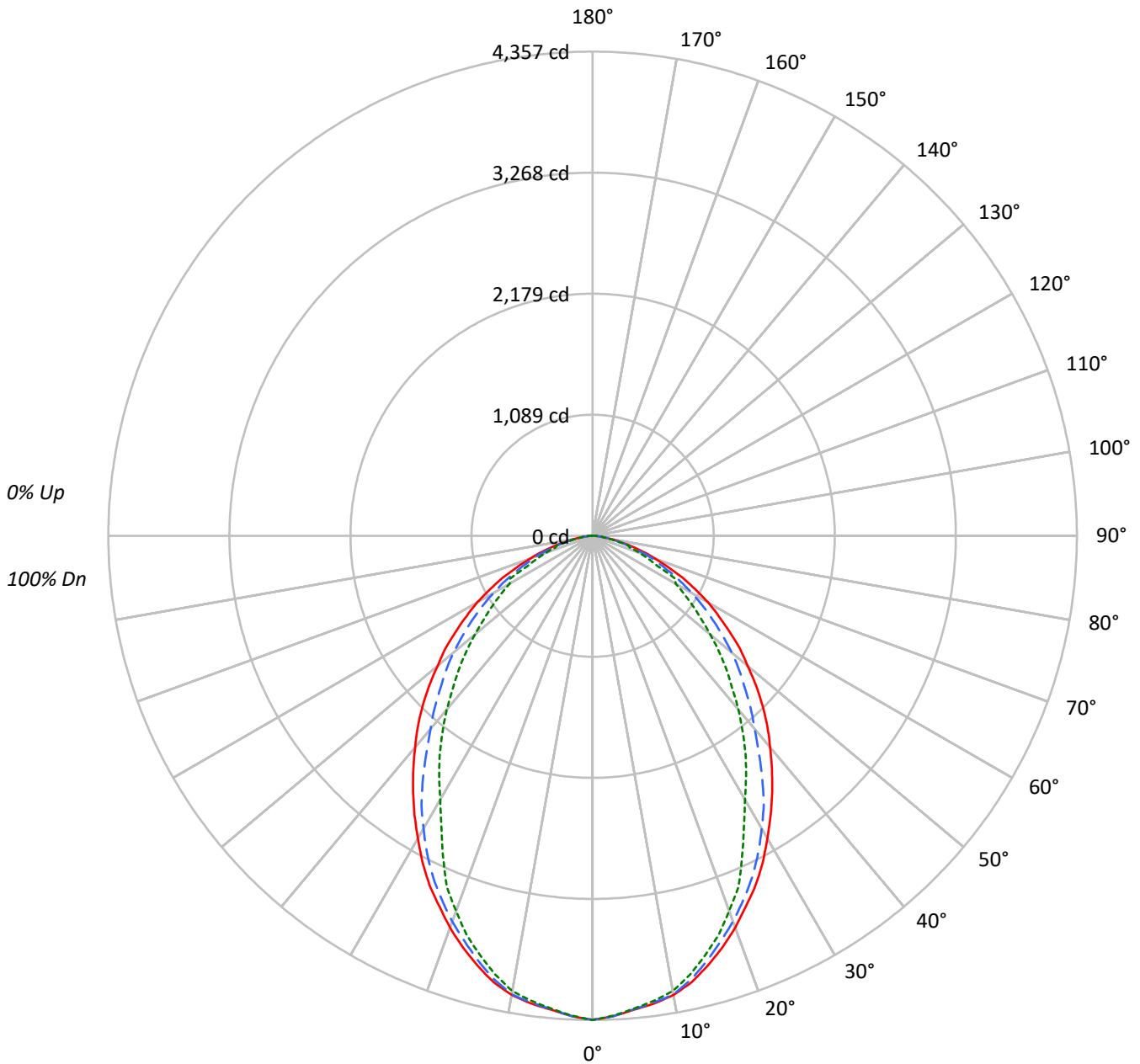
Lumens per Lamp: N/A
Luminaire Lumens: 8553.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	5862	5862	5862
5°	5782	5776	5769
10°	5732	5725	5684
15°	5578	5522	5444
20°	5373	5286	5142
25°	5152	5040	4726
30°	4883	4726	4257
35°	4625	4368	3938
40°	4361	3981	3583
45°	4112	3680	3239
50°	3806	3416	2889
55°	3521	3096	2587
60°	3226	2765	2318
65°	2838	2421	2053
70°	2338	2120	1744
75°	1859	1624	1702
80°	1249	1171	1093
85°	778	932	1088



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.6	4.7
10°-20°	1113.0	13.0
20°-30°	1540.9	18.0
30°-40°	1643.0	19.2
40°-50°	1498.9	17.5
50°-60°	1174.3	13.7
60°-70°	765.3	8.9
70°-80°	339.1	4.0
80°-90°	72.8	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°	3059.5	35.8
0°-40°	4702.5	55.0
0°-60°	7375.8	86.2
0°-90°	8553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4357	4357	4357	4357	4357	
5°	4281	4276	4276	4271	4271	406
15°	4004	4004	3964	3924	3908	1126
25°	3470	3450	3395	3274	3183	1593
35°	2816	2795	2659	2458	2398	1760
45°	2161	2115	1934	1773	1702	1664
55°	1501	1456	1320	1164	1103	1346
65°	892	841	760	776	645	879
75°	358	332	312	297	327	383
85°	50	55	60	66	70	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4356.8	4356.8	4356.8	4356.8	4356.8
2.5°	4326.6	4326.6	4326.6	4321.5	4321.5
5°	4281.2	4276.2	4276.2	4271.2	4271.2
7.5°	4246.0	4240.9	4235.9	4230.9	4220.8
10°	4195.6	4195.6	4190.6	4165.4	4160.4
12.5°	4115.0	4110.0	4089.8	4054.6	4044.5
15°	4004.2	4004.2	3963.9	3923.6	3908.5
17.5°	3883.3	3878.3	3827.9	3787.6	3767.5
20°	3752.4	3742.3	3691.9	3626.5	3591.2
22.5°	3606.3	3606.3	3545.9	3460.2	3425.0
25°	3470.3	3450.2	3394.8	3273.9	3183.2
27.5°	3314.2	3284.0	3223.5	3052.3	2946.5
30°	3142.9	3127.8	3042.2	2820.6	2740.0
32.5°	2981.8	2956.6	2865.9	2634.2	2568.7
35°	2815.5	2795.4	2659.4	2457.9	2397.5
37.5°	2649.3	2624.1	2452.9	2291.7	2216.2
40°	2483.1	2452.9	2266.5	2120.5	2039.9
42.5°	2327.0	2286.7	2105.4	1949.2	1858.6
45°	2160.8	2115.4	1934.1	1772.9	1702.4
47.5°	1994.6	1954.3	1788.0	1621.8	1541.2
50°	1818.3	1783.0	1631.9	1465.7	1380.1
52.5°	1672.2	1616.8	1470.7	1304.5	1234.0
55°	1500.9	1455.6	1319.6	1163.5	1103.0
57.5°	1344.8	1299.5	1173.6	1027.5	977.1
60°	1198.7	1133.3	1027.5	901.6	861.3
62.5°	1037.6	987.2	896.5	790.8	841.1
65°	891.5	841.1	760.5	775.7	644.7
67.5°	730.3	705.1	634.6	564.1	544.0
70°	594.3	564.1	538.9	463.4	443.2
72.5°	473.5	443.2	408.0	367.7	352.6
75°	357.6	332.4	312.3	297.2	327.4
77.5°	246.8	236.7	221.6	206.5	201.5
80°	161.2	156.1	151.1	146.1	141.0
82.5°	95.7	95.7	95.7	95.7	95.7
85°	50.4	55.4	60.4	65.5	70.5
87.5°	30.2	30.2	35.3	40.3	45.3
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)