

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: P547238

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-81-97-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: P547238
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-50-UNV-81-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

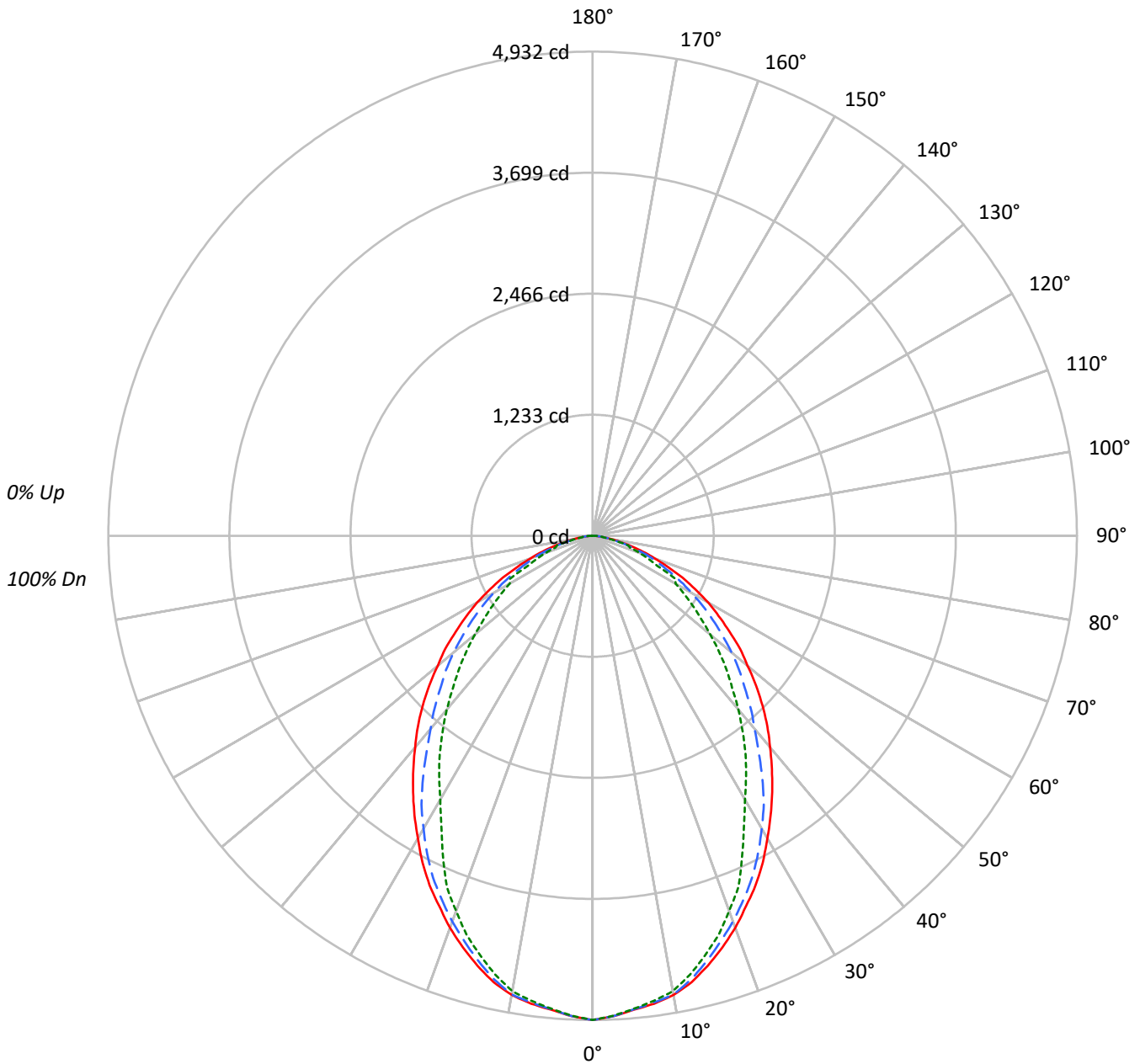
Lumens per Lamp: N/A
Luminaire Lumens: 9683.0 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6636	6636	6636
5°	6546	6539	6531
10°	6490	6482	6435
15°	6315	6251	6164
20°	6083	5985	5821
25°	5833	5706	5350
30°	5528	5351	4819
35°	5236	4945	4458
40°	4938	4507	4056
45°	4655	4166	3667
50°	4309	3867	3270
55°	3986	3505	2929
60°	3652	3130	2624
65°	3213	2741	2324
70°	2647	2400	1974
75°	2105	1838	1927
80°	1414	1326	1237
85°	880	1056	1232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	459.1	4.7
10°-20°	1260.1	13.0
20°-30°	1744.5	18.0
30°-40°	1860.1	19.2
40°-50°	1697.0	17.5
50°-60°	1329.4	13.7
60°-70°	866.5	8.9
70°-80°	383.9	4.0
80°-90°	82.4	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°	3463.7	35.8
0°-40°	5323.8	55.0
0°-60°	8350.2	86.2
0°-90°	9683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4932	4932	4932	4932	4932	
5°	4847	4841	4841	4836	4836	460
15°	4533	4533	4488	4442	4425	1274
25°	3929	3906	3843	3706	3604	1804
35°	3188	3165	3011	2783	2714	1993
45°	2446	2395	2190	2007	1927	1884
55°	1699	1648	1494	1317	1249	1524
65°	1009	952	861	878	730	995
75°	405	376	354	336	371	434
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4932.4	4932.4	4932.4	4932.4	4932.4
2.5°	4898.2	4898.2	4898.2	4892.5	4892.5
5°	4846.9	4841.2	4841.2	4835.5	4835.5
7.5°	4806.9	4801.2	4795.5	4789.8	4778.4
10°	4749.9	4749.9	4744.2	4715.7	4710.0
12.5°	4658.7	4653.0	4630.2	4590.3	4578.9
15°	4533.2	4533.2	4487.6	4442.0	4424.9
17.5°	4396.4	4390.7	4333.7	4288.0	4265.2
20°	4248.1	4236.7	4179.7	4105.6	4065.7
22.5°	4082.8	4082.8	4014.3	3917.4	3877.5
25°	3928.8	3906.0	3843.3	3706.4	3603.8
27.5°	3752.0	3717.8	3649.4	3455.5	3335.8
30°	3558.2	3541.1	3444.1	3193.2	3102.0
32.5°	3375.7	3347.2	3244.5	2982.2	2908.1
35°	3187.5	3164.7	3010.8	2782.7	2714.2
37.5°	2999.3	2970.8	2777.0	2594.5	2509.0
40°	2811.2	2777.0	2566.0	2400.6	2309.4
42.5°	2634.4	2588.8	2383.5	2206.7	2104.1
45°	2446.2	2394.9	2189.6	2007.2	1927.3
47.5°	2258.1	2212.4	2024.3	1836.1	1744.9
50°	2058.5	2018.6	1847.5	1659.3	1562.4
52.5°	1893.1	1830.4	1665.0	1476.9	1397.0
55°	1699.3	1647.9	1494.0	1317.2	1248.8
57.5°	1522.5	1471.2	1328.6	1163.2	1106.2
60°	1357.1	1283.0	1163.2	1020.7	975.1
62.5°	1174.7	1117.6	1015.0	895.2	952.3
65°	1009.3	952.3	861.0	878.1	729.9
67.5°	826.8	798.3	718.5	638.6	615.8
70°	672.9	638.6	610.1	524.6	501.8
72.5°	536.0	501.8	461.9	416.3	399.2
75°	404.9	376.3	353.5	336.4	370.6
77.5°	279.4	268.0	250.9	233.8	228.1
80°	182.5	176.8	171.1	165.4	159.7
82.5°	108.3	108.3	108.3	108.3	108.3
85°	57.0	62.7	68.4	74.1	79.8
87.5°	34.2	34.2	39.9	45.6	51.3
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)