

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: P547523

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-81-88-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: P547523
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-50-UNV-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

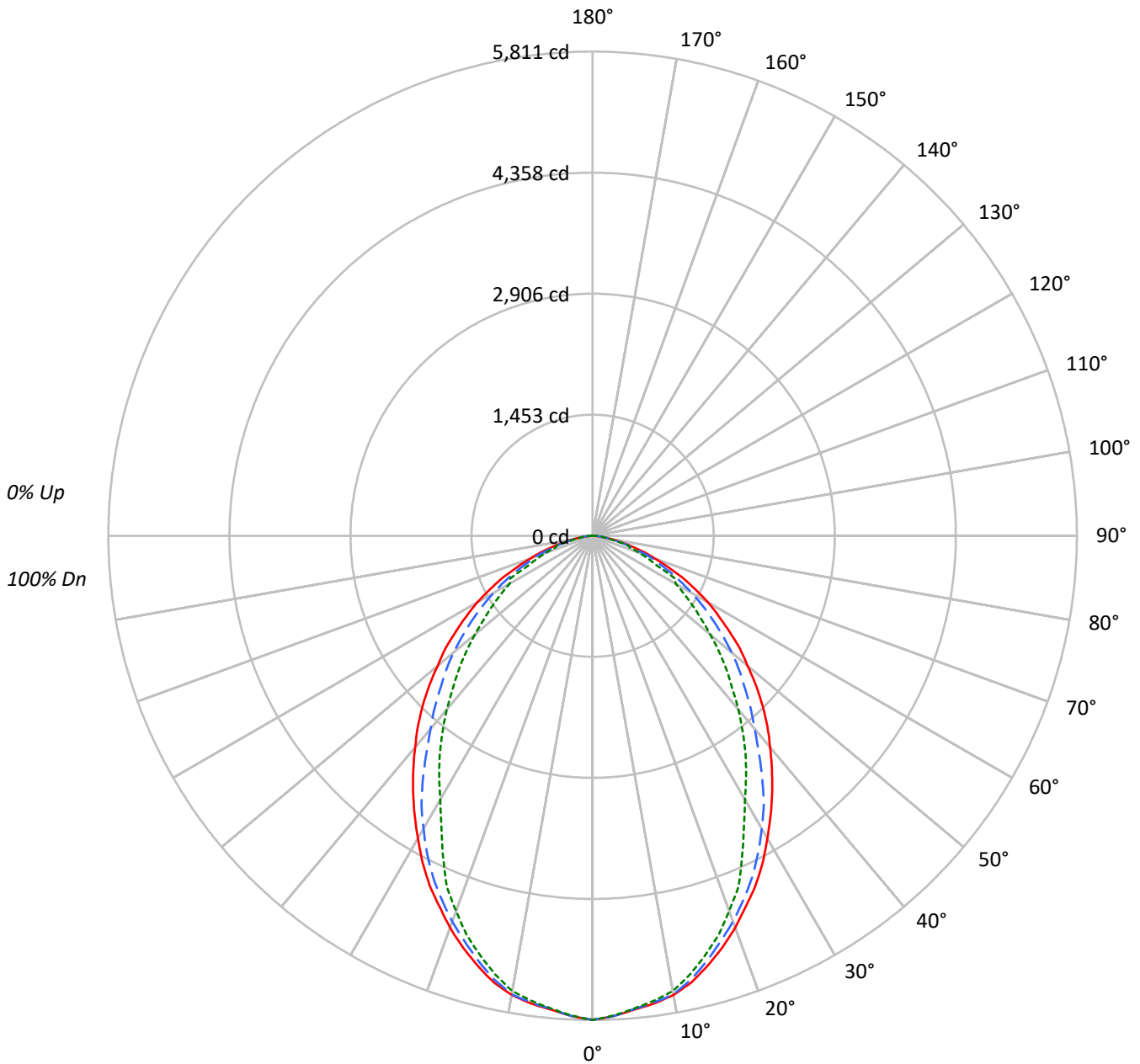
Lumens per Lamp: N/A
Luminaire Lumens: 11407.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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				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°	7818	7818	7818
5°	7712	7703	7694
10°	7645	7636	7581
15°	7439	7364	7261
20°	7166	7050	6858
25°	6871	6721	6303
30°	6512	6304	5677
35°	6168	5826	5252
40°	5817	5309	4778
45°	5484	4908	4320
50°	5076	4556	3853
55°	4696	4129	3451
60°	4302	3688	3091
65°	3785	3229	2737
70°	3118	2828	2325
75°	2479	2165	2270
80°	1666	1561	1457
85°	1037	1244	1451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	540.9	4.7
10°-20°	1484.4	13.0
20°-30°	2055.1	18.0
30°-40°	2191.3	19.2
40°-50°	1999.1	17.5
50°-60°	1566.2	13.7
60°-70°	1020.7	8.9
70°-80°	452.2	4.0
80°-90°	97.1	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°	4080.4	35.8
0°-40°	6271.7	55.0
0°-60°	9836.9	86.2
0°-90°	11407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11407.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5811	5811	5811	5811	5811	
5°	5710	5703	5703	5696	5696	542
15°	5340	5340	5287	5233	5213	1501
25°	4628	4601	4528	4366	4245	2125
35°	3755	3728	3547	3278	3198	2348
45°	2882	2821	2580	2364	2270	2220
55°	2002	1941	1760	1552	1471	1795
65°	1189	1122	1014	1034	860	1172
75°	477	443	416	396	437	511
85°	67	74	81	87	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5810.6	5810.6	5810.6	5810.6	5810.6
2.5°	5770.3	5770.3	5770.3	5763.6	5763.6
5°	5709.8	5703.1	5703.1	5696.4	5696.4
7.5°	5662.8	5656.1	5649.4	5642.6	5629.2
10°	5595.6	5595.6	5588.9	5555.3	5548.6
12.5°	5488.1	5481.4	5454.5	5407.5	5394.1
15°	5340.4	5340.4	5286.6	5232.9	5212.7
17.5°	5179.1	5172.4	5105.2	5051.5	5024.6
20°	5004.5	4991.0	4923.9	4836.5	4789.5
22.5°	4809.7	4809.7	4729.1	4614.9	4567.8
25°	4628.3	4601.4	4527.5	4366.3	4245.4
27.5°	4420.1	4379.8	4299.2	4070.8	3929.7
30°	4191.7	4171.5	4057.3	3761.8	3654.3
32.5°	3976.7	3943.1	3822.2	3513.2	3425.9
35°	3755.0	3728.2	3546.8	3278.1	3197.5
37.5°	3533.4	3499.8	3271.4	3056.4	2955.7
40°	3311.7	3271.4	3022.8	2828.0	2720.6
42.5°	3103.5	3049.7	2807.9	2599.6	2478.7
45°	2881.8	2821.3	2579.5	2364.5	2270.5
47.5°	2660.1	2606.4	2384.7	2163.0	2055.5
50°	2425.0	2378.0	2176.4	1954.8	1840.6
52.5°	2230.2	2156.3	1961.5	1739.8	1645.8
55°	2001.8	1941.3	1760.0	1551.7	1471.1
57.5°	1793.6	1733.1	1565.2	1370.4	1303.2
60°	1598.7	1511.4	1370.4	1202.4	1148.7
62.5°	1383.8	1316.6	1195.7	1054.6	1121.8
65°	1189.0	1121.8	1014.3	1034.5	859.8
67.5°	974.0	940.4	846.4	752.4	725.5
70°	792.7	752.4	718.8	618.0	591.1
72.5°	631.4	591.1	544.1	490.4	470.2
75°	476.9	443.4	416.5	396.3	436.6
77.5°	329.2	315.7	295.6	275.4	268.7
80°	215.0	208.2	201.5	194.8	188.1
82.5°	127.6	127.6	127.6	127.6	127.6
85°	67.2	73.9	80.6	87.3	94.0
87.5°	40.3	40.3	47.0	53.7	60.5
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)