

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: P547236

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-81-94-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: P547236
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-81-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

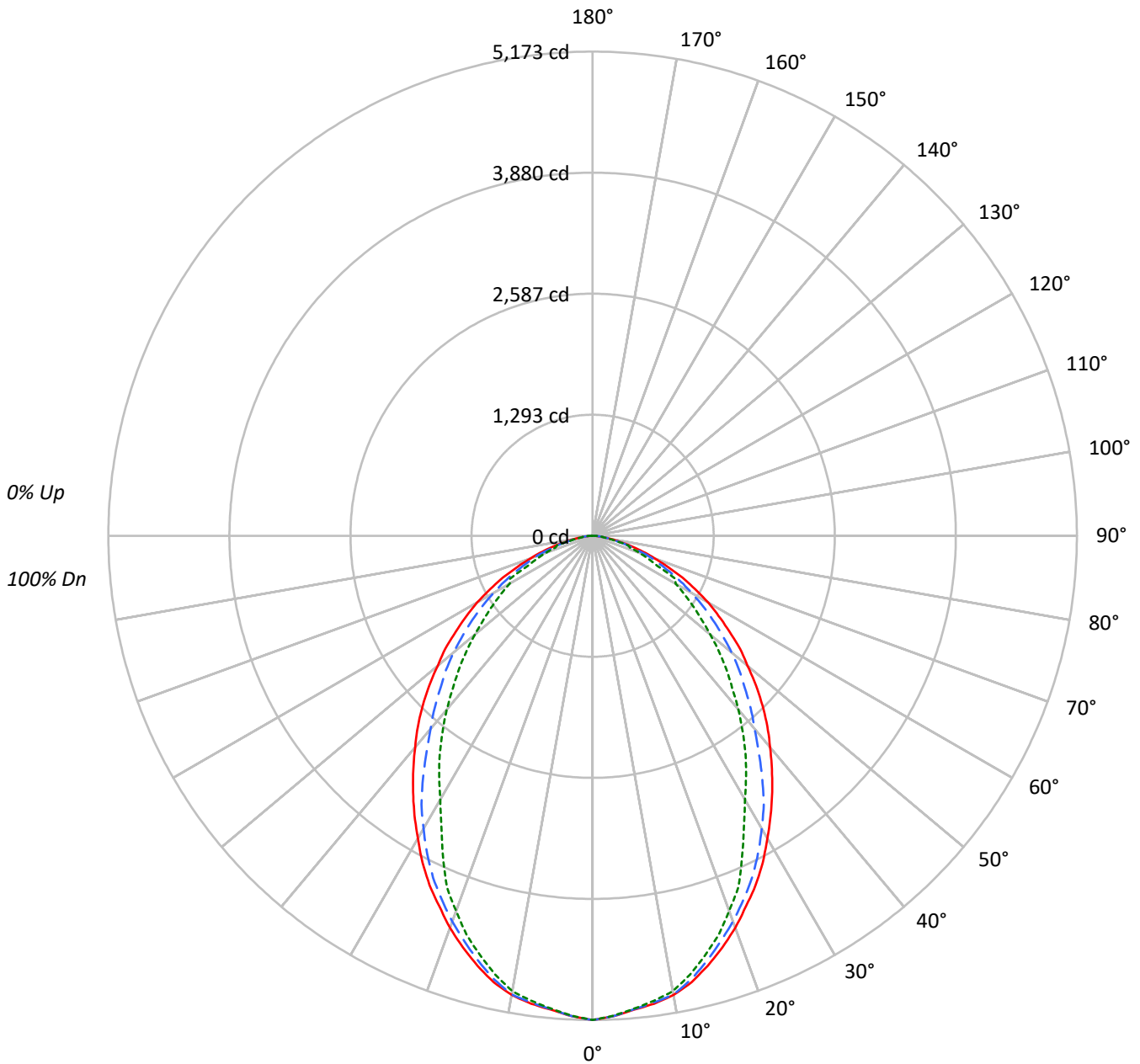
Lumens per Lamp: N/A
Luminaire Lumens: 10156.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	6961	6961	6961
5°	6866	6858	6850
10°	6806	6798	6749
15°	6623	6556	6465
20°	6380	6277	6106
25°	6118	5984	5611
30°	5798	5612	5055
35°	5491	5187	4676
40°	5179	4727	4254
45°	4882	4370	3847
50°	4519	4056	3430
55°	4181	3676	3073
60°	3830	3283	2752
65°	3370	2875	2437
70°	2776	2517	2070
75°	2207	1928	2021
80°	1483	1390	1298
85°	923	1108	1292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.6	4.7
10°-20°	1321.6	13.0
20°-30°	1829.7	18.0
30°-40°	1951.0	19.2
40°-50°	1779.9	17.5
50°-60°	1394.4	13.7
60°-70°	908.8	8.9
70°-80°	402.6	4.0
80°-90°	86.4	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°	3632.9	35.8
0°-40°	5583.9	55.0
0°-60°	8758.1	86.2
0°-90°	10156.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10156.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5173	5173	5173	5173	5173	
5°	5084	5078	5078	5072	5072	483
15°	4755	4755	4707	4659	4641	1337
25°	4121	4097	4031	3888	3780	1892
35°	3343	3319	3158	2919	2847	2090
45°	2566	2512	2297	2105	2022	1976
55°	1782	1728	1567	1382	1310	1599
65°	1059	999	903	921	766	1043
75°	425	395	371	353	389	455
85°	60	66	72	78	84	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5173.3	5173.3	5173.3	5173.3	5173.3
2.5°	5137.4	5137.4	5137.4	5131.5	5131.5
5°	5083.6	5077.6	5077.6	5071.7	5071.7
7.5°	5041.8	5035.8	5029.8	5023.8	5011.9
10°	4981.9	4981.9	4976.0	4946.1	4940.1
12.5°	4886.3	4880.3	4856.4	4814.5	4802.5
15°	4754.7	4754.7	4706.8	4659.0	4641.0
17.5°	4611.1	4605.2	4545.4	4497.5	4473.6
20°	4455.6	4443.7	4383.9	4306.1	4264.3
22.5°	4282.2	4282.2	4210.4	4108.8	4066.9
25°	4120.7	4096.8	4031.0	3887.5	3779.8
27.5°	3935.3	3899.4	3827.7	3624.3	3498.7
30°	3732.0	3714.0	3612.4	3349.2	3253.5
32.5°	3540.6	3510.7	3403.0	3127.9	3050.2
35°	3343.2	3319.3	3157.8	2918.6	2846.8
37.5°	3145.9	3116.0	2912.6	2721.2	2631.5
40°	2948.5	2912.6	2691.3	2517.9	2422.2
42.5°	2763.1	2715.3	2499.9	2314.5	2206.9
45°	2565.7	2511.9	2296.6	2105.2	2021.5
47.5°	2368.4	2320.5	2123.2	1925.8	1830.1
50°	2159.0	2117.2	1937.8	1740.4	1638.7
52.5°	1985.6	1919.8	1746.4	1549.0	1465.3
55°	1782.3	1728.4	1567.0	1381.5	1309.8
57.5°	1596.9	1543.0	1393.5	1220.1	1160.3
60°	1423.4	1345.7	1220.1	1070.6	1022.7
62.5°	1232.0	1172.2	1064.6	939.0	998.8
65°	1058.6	998.8	903.1	921.0	765.5
67.5°	867.2	837.3	753.6	669.8	645.9
70°	705.7	669.8	639.9	550.2	526.3
72.5°	562.2	526.3	484.4	436.6	418.7
75°	424.6	394.7	370.8	352.9	388.7
77.5°	293.1	281.1	263.2	245.2	239.2
80°	191.4	185.4	179.4	173.4	167.5
82.5°	113.6	113.6	113.6	113.6	113.6
85°	59.8	65.8	71.8	77.7	83.7
87.5°	35.9	35.9	41.9	47.8	53.8
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)