

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: P547518

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-80-97-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: P547518
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-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

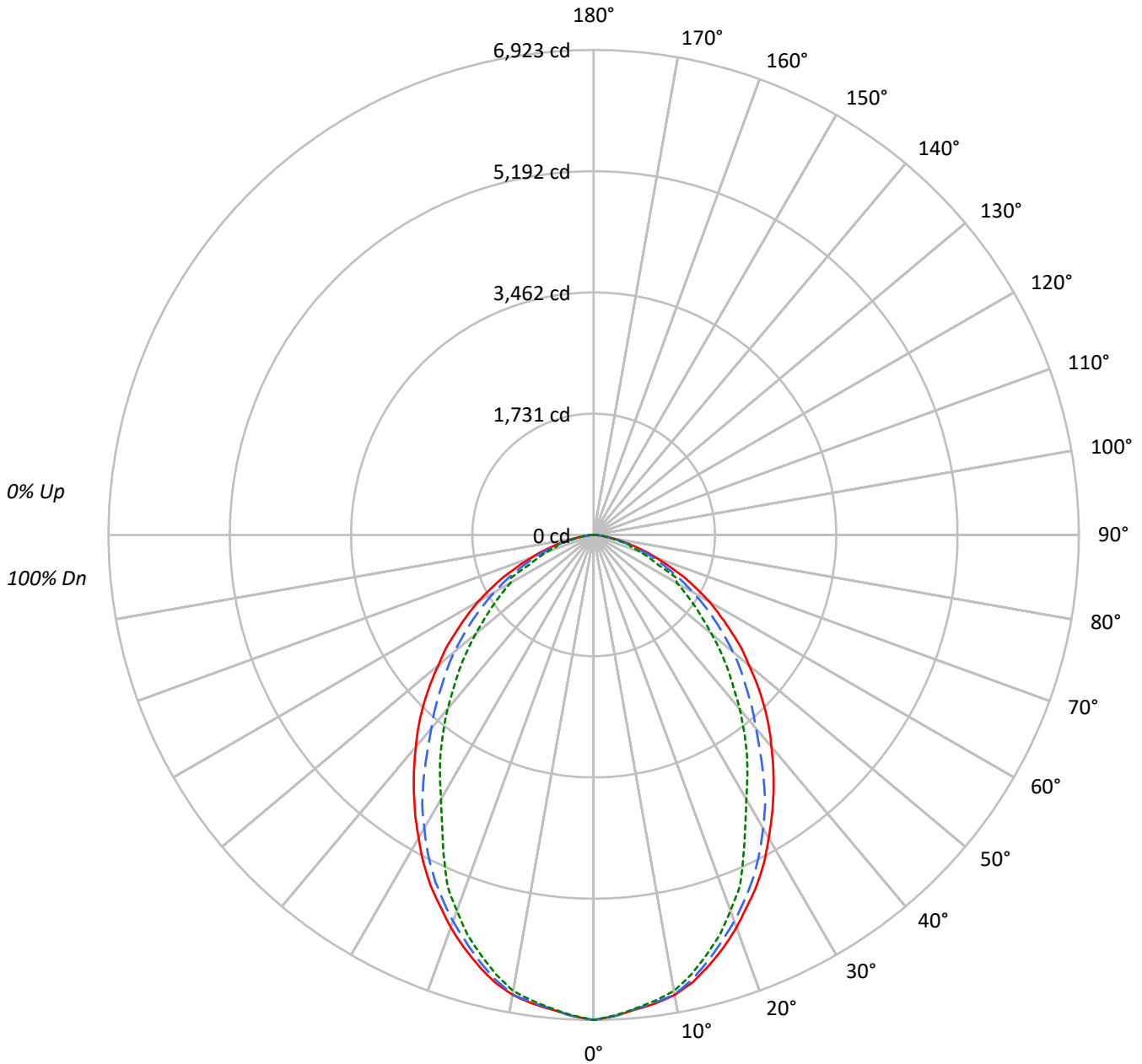
Lumens per Lamp: N/A
Luminaire Lumens: 13591.0 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	9315	9315	9315
5°	9188	9178	9167
10°	9109	9098	9032
15°	8863	8774	8651
20°	8537	8400	8171
25°	8187	8008	7509
30°	7759	7510	6764
35°	7349	6941	6258
40°	6930	6326	5693
45°	6533	5848	5147
50°	6048	5428	4590
55°	5595	4919	4112
60°	5126	4394	3683
65°	4510	3848	3262
70°	3715	3369	2771
75°	2954	2580	2704
80°	1984	1860	1736
85°	1235	1482	1729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	644.4	4.7
10°-20°	1768.6	13.0
20°-30°	2448.5	18.0
30°-40°	2610.9	19.2
40°-50°	2381.9	17.5
50°-60°	1866.0	13.7
60°-70°	1216.2	8.9
70°-80°	538.8	4.0
80°-90°	115.7	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°	4861.6	35.8
0°-40°	7472.5	55.0
0°-60°	11720.3	86.2
0°-90°	13591.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13591.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6923	6923	6923	6923	6923	
5°	6803	6795	6795	6787	6787	646
15°	6363	6363	6299	6235	6211	1789
25°	5514	5482	5394	5202	5058	2532
35°	4474	4442	4226	3906	3810	2797
45°	3434	3362	3073	2817	2705	2645
55°	2385	2313	2097	1849	1753	2139
65°	1417	1337	1208	1232	1024	1396
75°	568	528	496	472	520	609
85°	80	88	96	104	112	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6923.1	6923.1	6923.1	6923.1	6923.1
2.5°	6875.1	6875.1	6875.1	6867.0	6867.0
5°	6803.0	6795.0	6795.0	6787.0	6787.0
7.5°	6747.0	6739.0	6731.0	6723.0	6707.0
10°	6667.0	6667.0	6659.0	6618.9	6610.9
12.5°	6538.9	6530.9	6498.9	6442.9	6426.9
15°	6362.8	6362.8	6298.8	6234.8	6210.8
17.5°	6170.7	6162.7	6082.7	6018.7	5986.7
20°	5962.6	5946.6	5866.6	5762.6	5706.5
22.5°	5730.5	5730.5	5634.5	5498.4	5442.4
25°	5514.4	5482.4	5394.4	5202.3	5058.2
27.5°	5266.3	5218.3	5122.3	4850.2	4682.1
30°	4994.2	4970.2	4834.1	4482.0	4353.9
32.5°	4738.1	4698.1	4554.0	4185.9	4081.8
35°	4474.0	4442.0	4225.9	3905.7	3809.7
37.5°	4209.9	4169.9	3897.7	3641.6	3521.6
40°	3945.8	3897.7	3601.6	3369.5	3241.4
42.5°	3697.6	3633.6	3345.5	3097.4	2953.3
45°	3433.5	3361.5	3073.4	2817.3	2705.2
47.5°	3169.4	3105.4	2841.3	2577.1	2449.1
50°	2889.3	2833.3	2593.2	2329.0	2193.0
52.5°	2657.2	2569.1	2337.0	2072.9	1960.9
55°	2385.1	2313.0	2096.9	1848.8	1752.8
57.5°	2136.9	2064.9	1864.8	1632.7	1552.7
60°	1904.8	1800.8	1632.7	1432.6	1368.6
62.5°	1648.7	1568.7	1424.6	1256.6	1336.6
65°	1416.6	1336.6	1208.5	1232.5	1024.5
67.5°	1160.5	1120.5	1008.4	896.4	864.4
70°	944.4	896.4	856.4	736.3	704.3
72.5°	752.3	704.3	648.3	584.3	560.2
75°	568.3	528.2	496.2	472.2	520.2
77.5°	392.2	376.2	352.2	328.1	320.1
80°	256.1	248.1	240.1	232.1	224.1
82.5°	152.1	152.1	152.1	152.1	152.1
85°	80.0	88.0	96.0	104.0	112.0
87.5°	48.0	48.0	56.0	64.0	72.0
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)