

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: P547294

Luminaire Tested: **FMR-24-4-LD4-4HI-40-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: P547294
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-LD4-4HI-40-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 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

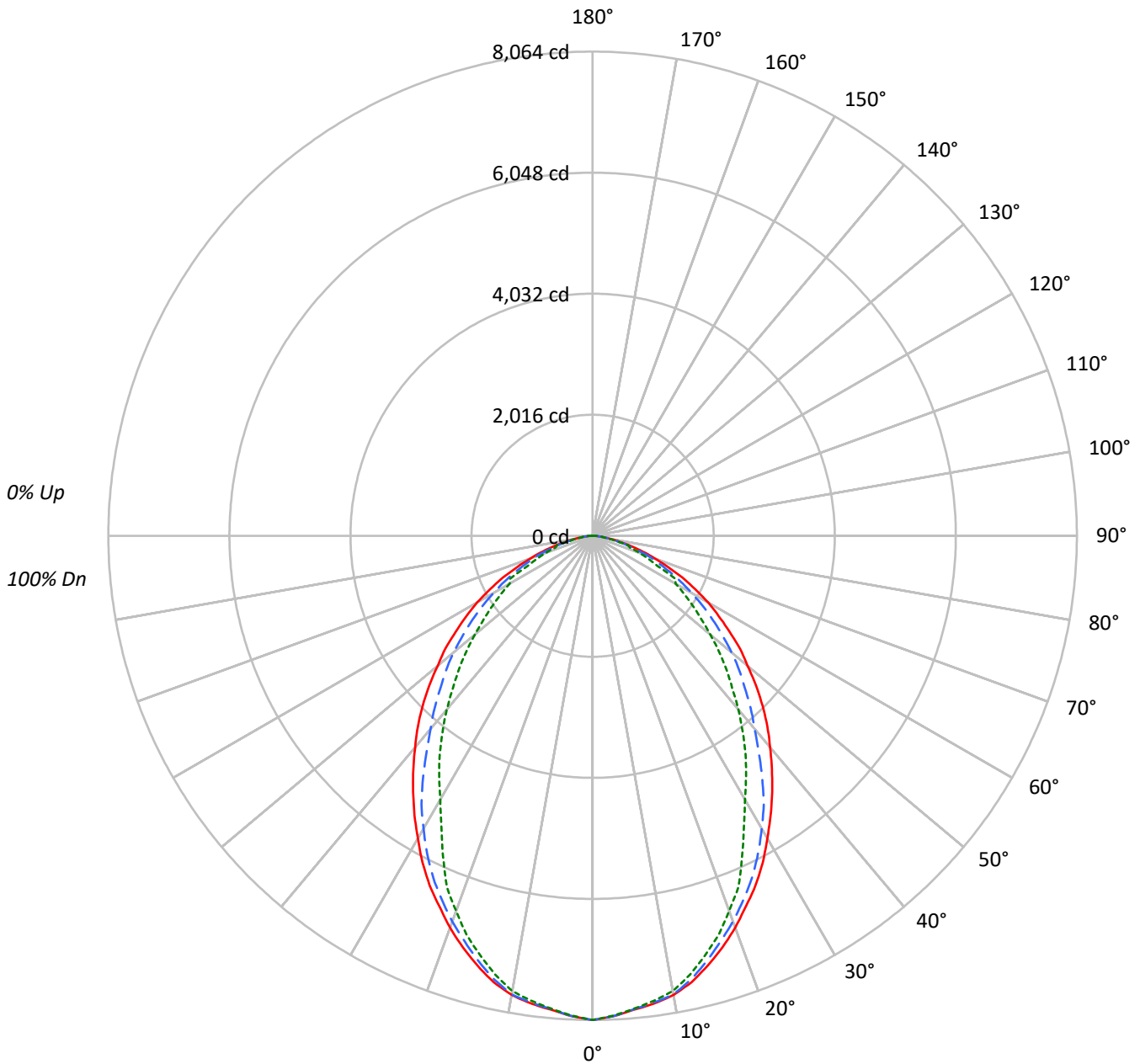
Lumens per Lamp: N/A
Luminaire Lumens: 15831.0 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
Input Voltage (V): NR
Input Current (A_{in}): 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								
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87								
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75								
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65								
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56								
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50								
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44								
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40								
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36								
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33								
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10850	10850	10850
5°	10703	10690	10678
10°	10610	10597	10521
15°	10324	10220	10077
20°	9945	9784	9518
25°	9536	9328	8747
30°	9038	8748	7879
35°	8560	8085	7289
40°	8073	7368	6632
45°	7610	6812	5996
50°	7045	6323	5347
55°	6517	5730	4789
60°	5971	5118	4290
65°	5253	4482	3799
70°	4328	3924	3227
75°	3441	3005	3150
80°	2311	2167	2022
85°	1439	1727	2015



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	750.7	4.7
10°-20°	2060.1	13.0
20°-30°	2852.1	18.0
30°-40°	3041.2	19.2
40°-50°	2774.4	17.5
50°-60°	2173.5	13.7
60°-70°	1416.6	8.9
70°-80°	627.6	4.0
80°-90°	134.7	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°	5662.9	35.8
0°-40°	8704.0	55.0
0°-60°	13652.0	86.2
0°-90°	15831.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15831.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8064	8064	8064	8064	8064	
5°	7924	7915	7915	7906	7906	752
15°	7412	7412	7337	7262	7234	2084
25°	6423	6386	6284	6060	5892	2949
35°	5211	5174	4922	4550	4438	3258
45°	3999	3916	3580	3282	3151	3081
55°	2778	2694	2442	2154	2042	2492
65°	1650	1557	1408	1436	1193	1626
75°	662	615	578	550	606	709
85°	93	102	112	121	130	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8064.1	8064.1	8064.1	8064.1	8064.1
2.5°	8008.2	8008.2	8008.2	7998.8	7998.8
5°	7924.3	7914.9	7914.9	7905.6	7905.6
7.5°	7859.0	7849.7	7840.4	7831.0	7812.4
10°	7765.8	7765.8	7756.5	7709.8	7700.5
12.5°	7616.6	7607.3	7570.0	7504.7	7486.1
15°	7411.5	7411.5	7336.9	7262.4	7234.4
17.5°	7187.8	7178.4	7085.2	7010.6	6973.3
20°	6945.4	6926.7	6833.5	6712.3	6647.1
22.5°	6675.0	6675.0	6563.2	6404.7	6339.4
25°	6423.3	6386.0	6283.5	6059.7	5891.9
27.5°	6134.3	6078.4	5966.5	5649.5	5453.8
30°	5817.3	5789.4	5630.9	5220.7	5071.5
32.5°	5519.0	5472.4	5304.6	4875.8	4754.6
35°	5211.4	5174.1	4922.4	4549.5	4437.6
37.5°	4903.7	4857.1	4540.1	4241.8	4102.0
40°	4596.1	4540.1	4195.2	3924.8	3775.7
42.5°	4307.1	4232.5	3896.9	3607.9	3440.1
45°	3999.4	3915.5	3579.9	3281.6	3151.1
47.5°	3691.8	3617.2	3309.5	3001.9	2852.7
50°	3365.5	3300.2	3020.5	2712.9	2554.4
52.5°	3095.1	2992.6	2722.2	2414.6	2284.1
55°	2778.2	2694.2	2442.5	2153.5	2041.7
57.5°	2489.1	2405.2	2172.2	1901.8	1808.6
60°	2218.8	2097.6	1901.8	1668.8	1594.2
62.5°	1920.5	1827.2	1659.4	1463.7	1556.9
65°	1650.1	1556.9	1407.7	1435.7	1193.3
67.5°	1351.8	1305.2	1174.7	1044.1	1006.8
70°	1100.1	1044.1	997.5	857.7	820.4
72.5°	876.3	820.4	755.1	680.6	652.6
75°	661.9	615.3	578.0	550.0	606.0
77.5°	456.8	438.2	410.2	382.2	372.9
80°	298.3	289.0	279.7	270.4	261.0
82.5°	177.1	177.1	177.1	177.1	177.1
85°	93.2	102.5	111.9	121.2	130.5
87.5°	55.9	55.9	65.3	74.6	83.9
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)