

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: P547259

Luminaire Tested: **FMR-24-4-LD4-4HI-35-UNV-80-88-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: P547259
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-35-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

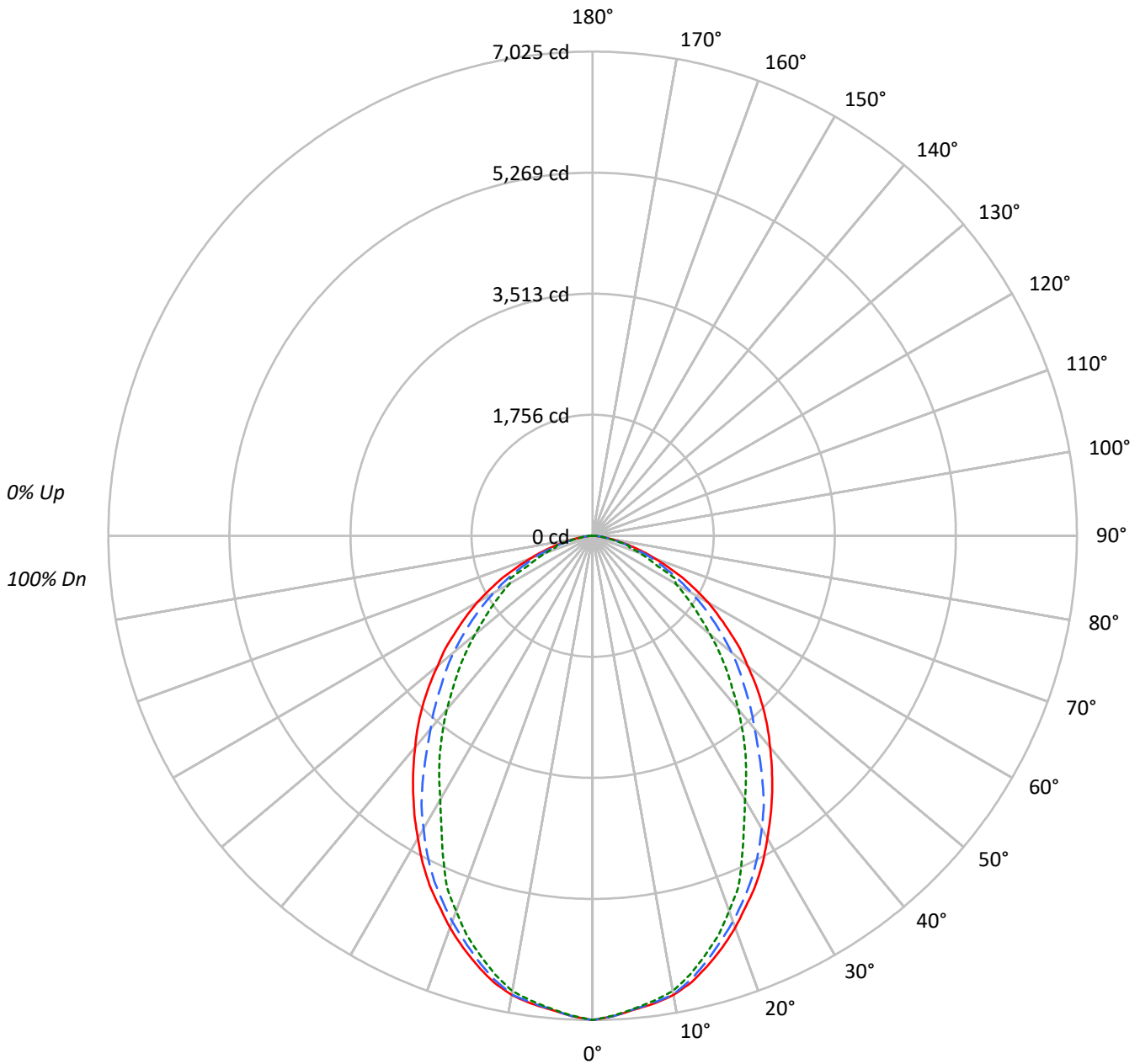
Lumens per Lamp: N/A
Luminaire Lumens: 13791.0 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
Input Voltage (V): NR
Input Current (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°	9452	9452	9452
5°	9324	9313	9302
10°	9243	9232	9165
15°	8994	8903	8779
20°	8663	8524	8291
25°	8307	8126	7620
30°	7873	7621	6864
35°	7457	7043	6350
40°	7032	6419	5777
45°	6630	5934	5223
50°	6137	5508	4658
55°	5677	4991	4172
60°	5201	4458	3737
65°	4577	3904	3309
70°	3770	3419	2812
75°	2997	2617	2744
80°	2014	1888	1762
85°	1254	1505	1755



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	653.9	4.7
10°-20°	1794.6	13.0
20°-30°	2484.6	18.0
30°-40°	2649.3	19.2
40°-50°	2416.9	17.5
50°-60°	1893.5	13.7
60°-70°	1234.1	8.9
70°-80°	546.7	4.0
80°-90°	117.4	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°	4933.2	35.8
0°-40°	7582.4	55.0
0°-60°	11892.8	86.2
0°-90°	13791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7025	7025	7025	7025	7025	
5°	6903	6895	6895	6887	6887	655
15°	6456	6456	6392	6326	6302	1815
25°	5596	5563	5474	5279	5133	2569
35°	4540	4507	4288	3963	3866	2838
45°	3484	3411	3119	2859	2745	2684
55°	2420	2347	2128	1876	1779	2171
65°	1438	1356	1226	1251	1040	1417
75°	577	536	504	479	528	618
85°	81	89	98	106	114	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7025.0	7025.0	7025.0	7025.0	7025.0
2.5°	6976.2	6976.2	6976.2	6968.1	6968.1
5°	6903.1	6895.0	6895.0	6886.9	6886.9
7.5°	6846.3	6838.2	6830.0	6821.9	6805.7
10°	6765.1	6765.1	6756.9	6716.3	6708.2
12.5°	6635.1	6627.0	6594.5	6537.7	6521.4
15°	6456.5	6456.5	6391.5	6326.5	6302.2
17.5°	6261.5	6253.4	6172.2	6107.2	6074.8
20°	6050.4	6034.1	5952.9	5847.4	5790.5
22.5°	5814.9	5814.9	5717.4	5579.4	5522.5
25°	5595.6	5563.1	5473.8	5278.9	5132.7
27.5°	5343.8	5295.1	5197.7	4921.5	4751.0
30°	5067.7	5043.3	4905.3	4547.9	4418.0
32.5°	4807.8	4767.2	4621.0	4247.5	4141.9
35°	4539.8	4507.3	4288.1	3963.2	3865.8
37.5°	4271.8	4231.2	3955.1	3695.2	3573.4
40°	4003.8	3955.1	3654.6	3419.1	3289.1
42.5°	3752.1	3687.1	3394.7	3143.0	2996.8
45°	3484.1	3411.0	3118.6	2858.7	2745.0
47.5°	3216.0	3151.1	2883.1	2615.1	2485.1
50°	2931.8	2875.0	2631.3	2363.3	2225.2
52.5°	2696.3	2606.9	2371.4	2103.4	1989.7
55°	2420.2	2347.1	2127.8	1876.0	1778.6
57.5°	2168.4	2095.3	1892.3	1656.8	1575.5
60°	1932.9	1827.3	1656.8	1453.7	1388.7
62.5°	1673.0	1591.8	1445.6	1275.0	1356.3
65°	1437.5	1356.3	1226.3	1250.7	1039.5
67.5°	1177.6	1137.0	1023.3	909.6	877.1
70°	958.3	909.6	869.0	747.2	714.7
72.5°	763.4	714.7	657.8	592.9	568.5
75°	576.6	536.0	503.5	479.2	527.9
77.5°	397.9	381.7	357.3	333.0	324.9
80°	259.9	251.8	243.6	235.5	227.4
82.5°	154.3	154.3	154.3	154.3	154.3
85°	81.2	89.3	97.5	105.6	113.7
87.5°	48.7	48.7	56.8	65.0	73.1
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)