

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: P547012

Luminaire Tested: **FMR-24-4-LD4-3HI-40-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: P547012
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-LD4-3HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

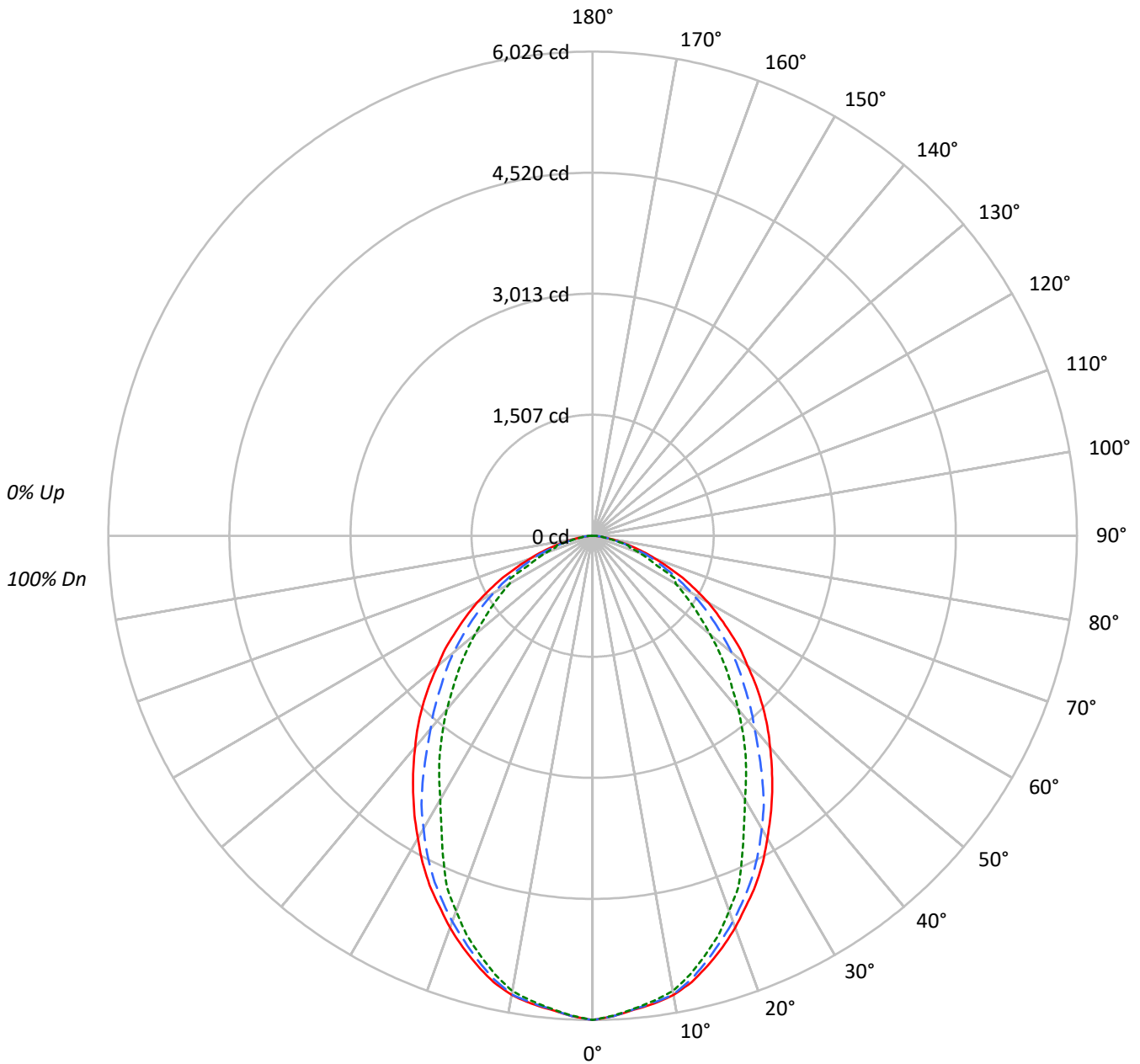
Lumens per Lamp: N/A
Luminaire Lumens: 11830.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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

TEST NUMBER: P547012

CATALOG NUMBER: FMR-24-4-LD4-3HI-40-UNV-81-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547012

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	8108	8108	8108
5°	7998	7988	7979
10°	7928	7919	7862
15°	7715	7637	7530
20°	7431	7312	7112
25°	7126	6971	6536
30°	6754	6537	5888
35°	6397	6042	5447
40°	6032	5506	4956
45°	5687	5090	4481
50°	5264	4725	3996
55°	4870	4282	3579
60°	4462	3824	3206
65°	3926	3349	2839
70°	3234	2932	2412
75°	2571	2245	2354
80°	1727	1619	1512
85°	1076	1291	1505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	560.9	4.7
10°-20°	1539.5	13.0
20°-30°	2131.3	18.0
30°-40°	2272.6	19.2
40°-50°	2073.2	17.5
50°-60°	1624.2	13.7
60°-70°	1058.6	8.9
70°-80°	469.0	4.0
80°-90°	100.7	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°	4231.7	35.8
0°-40°	6504.3	55.0
0°-60°	10201.7	86.2
0°-90°	11830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6026	6026	6026	6026	6026	
5°	5922	5915	5915	5908	5908	562
15°	5538	5538	5483	5427	5406	1557
25°	4800	4772	4695	4528	4403	2204
35°	3894	3866	3678	3400	3316	2435
45°	2989	2926	2675	2452	2355	2302
55°	2076	2013	1825	1609	1526	1862
65°	1233	1163	1052	1073	892	1215
75°	495	460	432	411	453	530
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6026.0	6026.0	6026.0	6026.0	6026.0
2.5°	5984.2	5984.2	5984.2	5977.3	5977.3
5°	5921.5	5914.6	5914.6	5907.6	5907.6
7.5°	5872.8	5865.8	5858.8	5851.9	5837.9
10°	5803.1	5803.1	5796.1	5761.3	5754.3
12.5°	5691.7	5684.7	5656.8	5608.1	5594.1
15°	5538.4	5538.4	5482.7	5426.9	5406.0
17.5°	5371.2	5364.2	5294.6	5238.8	5211.0
20°	5190.1	5176.1	5106.5	5015.9	4967.1
22.5°	4988.0	4988.0	4904.4	4786.0	4737.2
25°	4799.9	4772.1	4695.4	4528.2	4402.8
27.5°	4584.0	4542.2	4458.6	4221.7	4075.4
30°	4347.1	4326.2	4207.8	3901.3	3789.8
32.5°	4124.2	4089.4	3964.0	3643.5	3552.9
35°	3894.3	3866.4	3678.3	3399.7	3316.1
37.5°	3664.4	3629.6	3392.7	3169.8	3065.3
40°	3434.5	3392.7	3134.9	2932.9	2821.4
42.5°	3218.5	3162.8	2912.0	2696.0	2570.6
45°	2988.6	2925.9	2675.1	2452.2	2354.7
47.5°	2758.7	2703.0	2473.1	2243.2	2131.8
50°	2514.9	2466.1	2257.2	2027.3	1908.8
52.5°	2312.9	2236.3	2034.2	1804.3	1706.8
55°	2076.0	2013.3	1825.2	1609.3	1525.7
57.5°	1860.1	1797.4	1623.2	1421.2	1351.5
60°	1658.0	1567.5	1421.2	1247.0	1191.3
62.5°	1435.1	1365.4	1240.0	1093.7	1163.4
65°	1233.1	1163.4	1051.9	1072.8	891.7
67.5°	1010.1	975.3	877.8	780.3	752.4
70°	822.0	780.3	745.4	640.9	613.1
72.5°	654.9	613.1	564.3	508.6	487.7
75°	494.6	459.8	431.9	411.0	452.8
77.5°	341.4	327.4	306.5	285.6	278.7
80°	222.9	216.0	209.0	202.0	195.1
82.5°	132.4	132.4	132.4	132.4	132.4
85°	69.7	76.6	83.6	90.6	97.5
87.5°	41.8	41.8	48.8	55.7	62.7
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)