

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: P547033

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-80-86-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: P547033
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-50-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

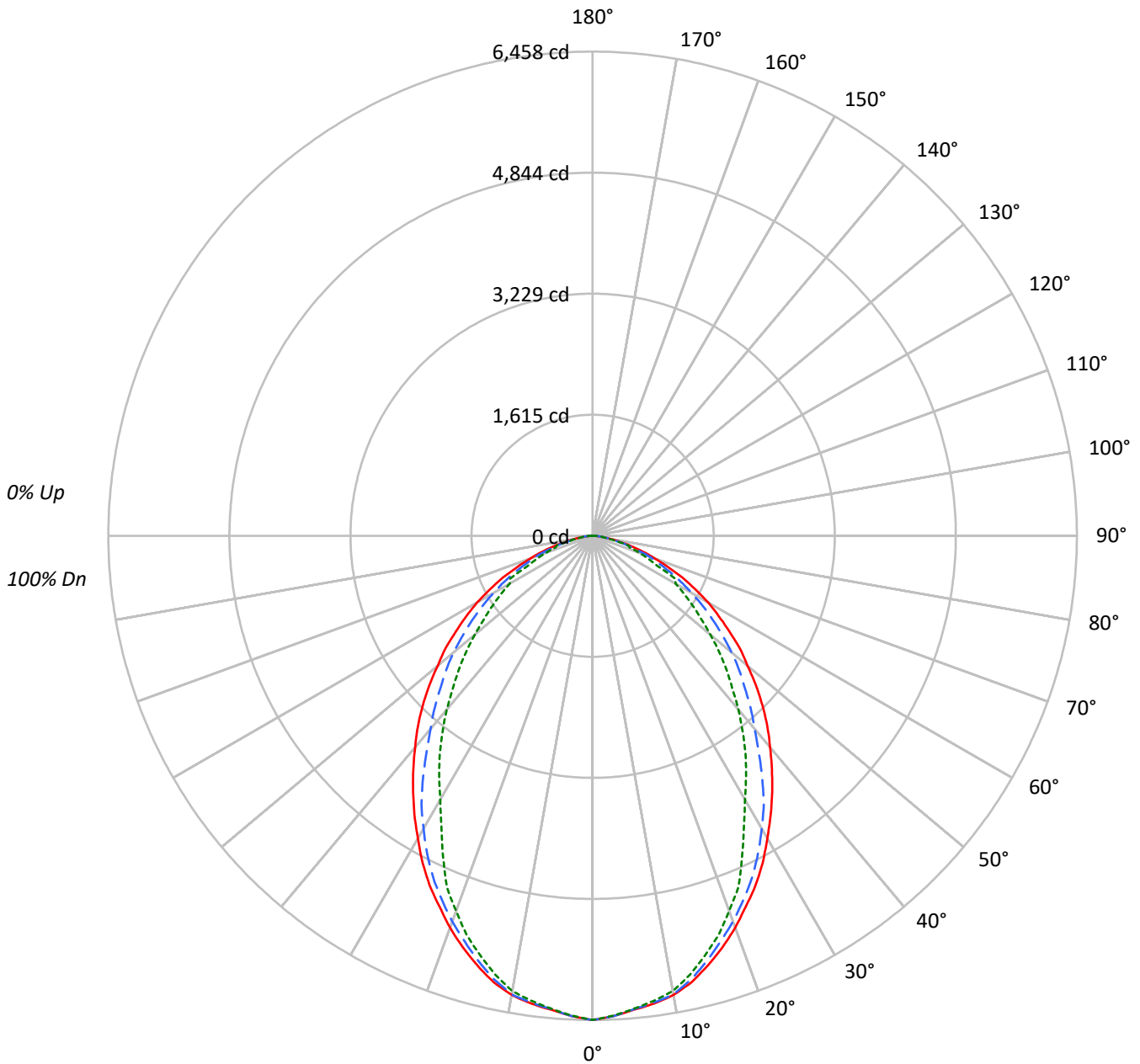
Lumens per Lamp: N/A
Luminaire Lumens: 12678.0 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	8689	8689	8689
5°	8571	8561	8551
10°	8497	8487	8425
15°	8268	8185	8070
20°	7964	7836	7622
25°	7637	7470	7005
30°	7238	7006	6310
35°	6855	6475	5837
40°	6465	5901	5311
45°	6095	5455	4802
50°	5642	5063	4282
55°	5219	4589	3835
60°	4782	4098	3436
65°	4207	3589	3042
70°	3466	3143	2585
75°	2756	2406	2523
80°	1851	1736	1619
85°	1153	1383	1613



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	601.2	4.7
10°-20°	1649.8	13.0
20°-30°	2284.1	18.0
30°-40°	2435.5	19.2
40°-50°	2221.9	17.5
50°-60°	1740.6	13.7
60°-70°	1134.5	8.9
70°-80°	502.6	4.0
80°-90°	107.9	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°	4535.0	35.8
0°-40°	6970.5	55.0
0°-60°	10933.0	86.2
0°-90°	12678.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12678.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6458	6458	6458	6458	6458	
5°	6346	6338	6338	6331	6331	602
15°	5935	5935	5876	5816	5794	1669
25°	5144	5114	5032	4853	4718	2362
35°	4173	4144	3942	3643	3554	2609
45°	3203	3136	2867	2628	2524	2467
55°	2225	2158	1956	1725	1635	1996
65°	1322	1247	1127	1150	956	1302
75°	530	493	463	440	485	568
85°	75	82	90	97	104	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6458.0	6458.0	6458.0	6458.0	6458.0
2.5°	6413.2	6413.2	6413.2	6405.7	6405.7
5°	6346.0	6338.5	6338.5	6331.1	6331.1
7.5°	6293.8	6286.3	6278.8	6271.4	6256.4
10°	6219.1	6219.1	6211.6	6174.3	6166.8
12.5°	6099.6	6092.2	6062.3	6010.0	5995.1
15°	5935.4	5935.4	5875.7	5815.9	5793.5
17.5°	5756.2	5748.7	5674.1	5614.4	5584.5
20°	5562.1	5547.2	5472.5	5375.4	5323.2
22.5°	5345.6	5345.6	5256.0	5129.1	5076.8
25°	5144.0	5114.1	5032.0	4852.8	4718.4
27.5°	4912.6	4867.8	4778.2	4524.3	4367.6
30°	4658.7	4636.3	4509.4	4180.9	4061.4
32.5°	4419.8	4382.5	4248.1	3904.7	3807.6
35°	4173.4	4143.6	3942.0	3643.4	3553.8
37.5°	3927.1	3889.7	3635.9	3397.0	3285.0
40°	3680.7	3635.9	3359.7	3143.1	3023.7
42.5°	3449.2	3389.5	3120.7	2889.3	2754.9
45°	3202.9	3135.7	2866.9	2628.0	2523.5
47.5°	2956.5	2896.8	2650.4	2404.0	2284.6
50°	2695.2	2642.9	2419.0	2172.6	2045.7
52.5°	2478.7	2396.6	2180.0	1933.7	1829.1
55°	2224.8	2157.6	1956.1	1724.6	1635.0
57.5°	1993.4	1926.2	1739.6	1523.0	1448.4
60°	1776.9	1679.8	1523.0	1336.4	1276.7
62.5°	1538.0	1463.3	1328.9	1172.1	1246.8
65°	1321.5	1246.8	1127.4	1149.7	955.6
67.5°	1082.6	1045.2	940.7	836.2	806.3
70°	881.0	836.2	798.9	686.9	657.0
72.5°	701.8	657.0	604.7	545.0	522.6
75°	530.1	492.7	462.9	440.5	485.3
77.5°	365.8	350.9	328.5	306.1	298.6
80°	238.9	231.4	224.0	216.5	209.0
82.5°	141.9	141.9	141.9	141.9	141.9
85°	74.7	82.1	89.6	97.1	104.5
87.5°	44.8	44.8	52.3	59.7	67.2
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)