

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: P546993

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-93-86-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: P546993
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-35-UNV-93-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

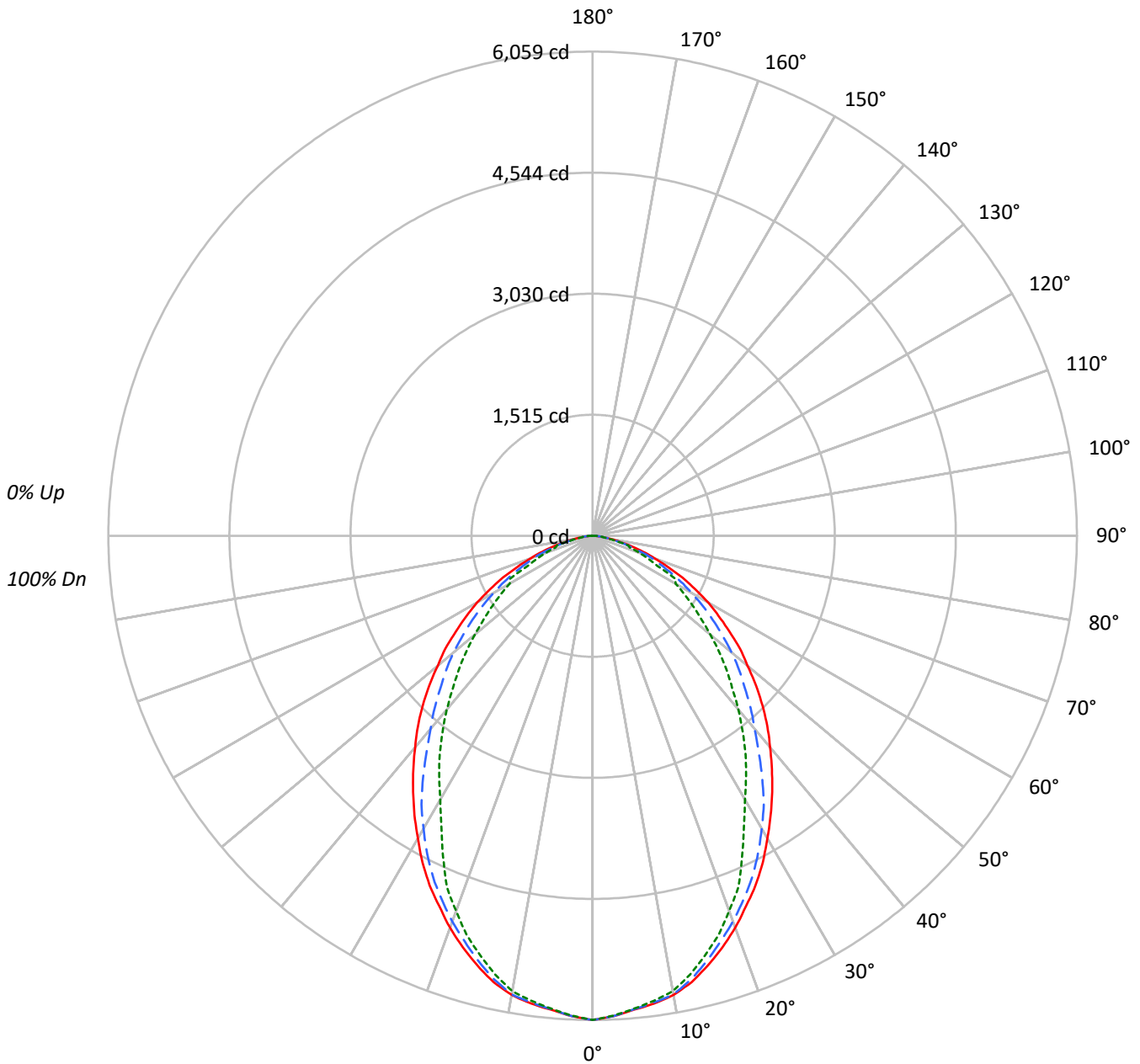
Lumens per Lamp: N/A
Luminaire Lumens: 11895.0 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	8153	8153	8153
5°	8042	8032	8023
10°	7972	7962	7905
15°	7757	7679	7572
20°	7472	7352	7151
25°	7165	7009	6572
30°	6791	6573	5920
35°	6432	6075	5477
40°	6066	5537	4983
45°	5718	5118	4505
50°	5293	4751	4017
55°	4897	4305	3599
60°	4486	3845	3223
65°	3947	3367	2855
70°	3252	2948	2425
75°	2585	2258	2367
80°	1737	1628	1519
85°	1081	1298	1514



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	564.0	4.7
10°-20°	1547.9	13.0
20°-30°	2143.0	18.0
30°-40°	2285.0	19.2
40°-50°	2084.6	17.5
50°-60°	1633.1	13.7
60°-70°	1064.4	8.9
70°-80°	471.6	4.0
80°-90°	101.2	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°	4254.9	35.8
0°-40°	6540.0	55.0
0°-60°	10257.8	86.2
0°-90°	11895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6059	6059	6059	6059	6059	
5°	5954	5947	5947	5940	5940	565
15°	5569	5569	5513	5457	5436	1566
25°	4826	4798	4721	4553	4427	2216
35°	3916	3888	3698	3418	3334	2448
45°	3005	2942	2690	2466	2368	2315
55°	2087	2024	1835	1618	1534	1872
65°	1240	1170	1058	1079	897	1222
75°	497	462	434	413	455	533
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°	6059.2	6059.2	6059.2	6059.2	6059.2
2.5°	6017.1	6017.1	6017.1	6010.1	6010.1
5°	5954.1	5947.1	5947.1	5940.1	5940.1
7.5°	5905.0	5898.0	5891.0	5884.0	5870.0
10°	5835.0	5835.0	5828.0	5793.0	5786.0
12.5°	5722.9	5715.9	5687.9	5638.9	5624.9
15°	5568.8	5568.8	5512.8	5456.7	5435.7
17.5°	5400.7	5393.7	5323.6	5267.6	5239.6
20°	5218.6	5204.6	5134.5	5043.5	4994.4
22.5°	5015.4	5015.4	4931.4	4812.3	4763.3
25°	4826.3	4798.3	4721.2	4553.1	4427.0
27.5°	4609.2	4567.1	4483.1	4244.9	4097.8
30°	4371.0	4350.0	4230.9	3922.7	3810.6
32.5°	4146.8	4111.8	3985.7	3663.5	3572.4
35°	3915.7	3887.7	3698.5	3418.3	3334.3
37.5°	3684.5	3649.5	3411.3	3187.2	3082.1
40°	3453.4	3411.3	3152.2	2949.0	2836.9
42.5°	3236.2	3180.2	2928.0	2710.9	2584.8
45°	3005.1	2942.0	2689.8	2465.7	2367.6
47.5°	2773.9	2717.9	2486.7	2255.5	2143.5
50°	2528.7	2479.7	2269.6	2038.4	1919.3
52.5°	2325.6	2248.5	2045.4	1814.2	1716.2
55°	2087.4	2024.4	1835.3	1618.1	1534.1
57.5°	1870.3	1807.2	1632.1	1429.0	1358.9
60°	1667.1	1576.1	1429.0	1253.9	1197.8
62.5°	1443.0	1372.9	1246.9	1099.8	1169.8
65°	1239.9	1169.8	1057.7	1078.7	896.6
67.5°	1015.7	980.7	882.6	784.5	756.5
70°	826.6	784.5	749.5	644.4	616.4
72.5°	658.5	616.4	567.4	511.4	490.3
75°	497.3	462.3	434.3	413.3	455.3
77.5°	343.2	329.2	308.2	287.2	280.2
80°	224.2	217.1	210.1	203.1	196.1
82.5°	133.1	133.1	133.1	133.1	133.1
85°	70.0	77.1	84.1	91.1	98.1
87.5°	42.0	42.0	49.0	56.0	63.0
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)