

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: P546974

Luminaire Tested: **FMR-24-4-LD4-3HI-35-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: P546974
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

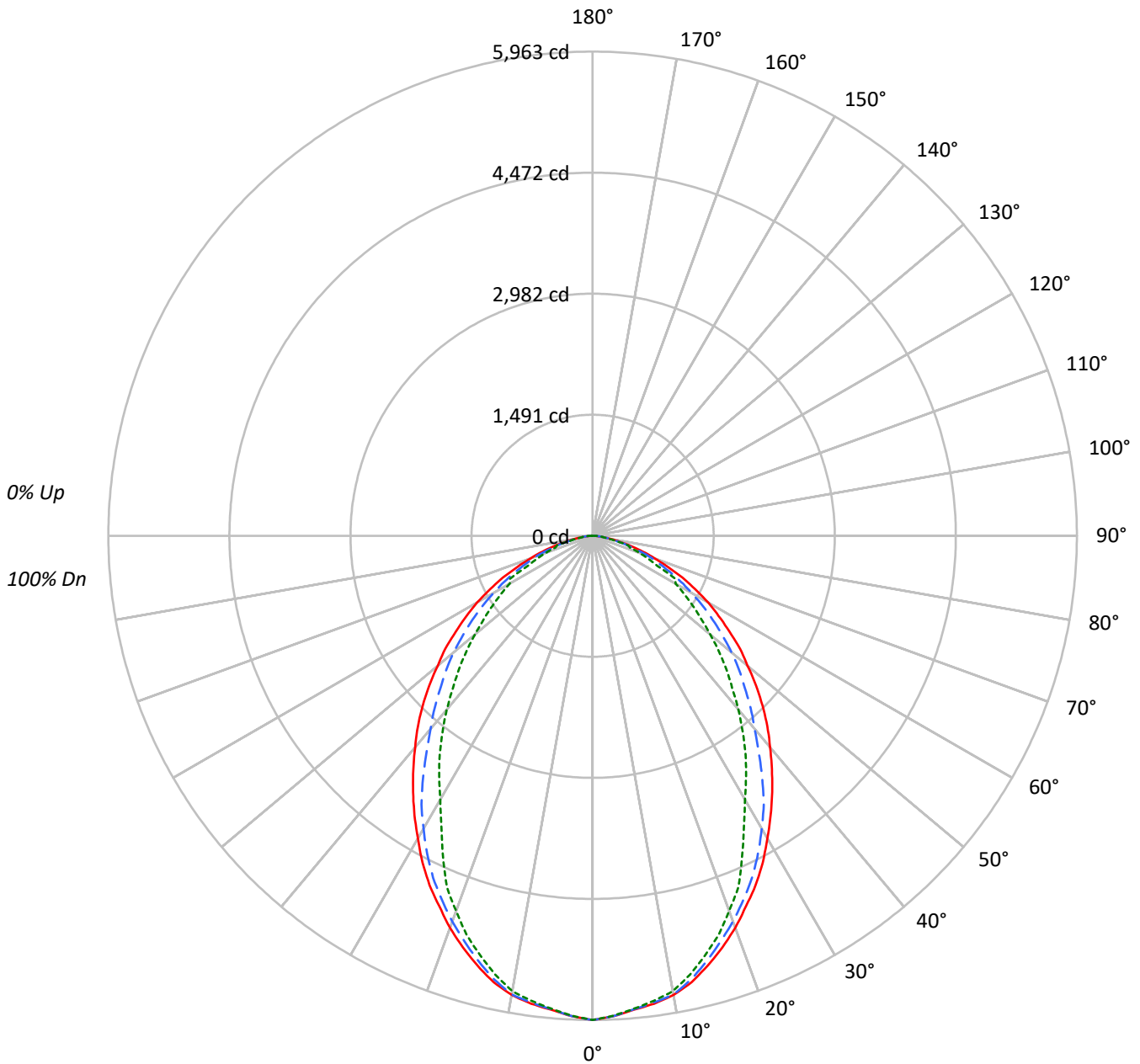
Lumens per Lamp: N/A
Luminaire Lumens: 11707.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	8024	8024	8024
5°	7915	7905	7896
10°	7846	7837	7780
15°	7634	7558	7452
20°	7354	7236	7038
25°	7052	6898	6468
30°	6684	6469	5827
35°	6330	5979	5390
40°	5970	5449	4904
45°	5628	5037	4434
50°	5210	4676	3954
55°	4819	4237	3542
60°	4415	3785	3172
65°	3885	3314	2809
70°	3200	2902	2387
75°	2545	2222	2329
80°	1709	1602	1495
85°	1064	1277	1490



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	555.1	4.7
10°-20°	1523.5	13.0
20°-30°	2109.1	18.0
30°-40°	2248.9	19.2
40°-50°	2051.7	17.5
50°-60°	1607.3	13.7
60°-70°	1047.6	8.9
70°-80°	464.1	4.0
80°-90°	99.6	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°	4187.7	35.8
0°-40°	6436.6	55.0
0°-60°	10095.6	86.2
0°-90°	11707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5963	5963	5963	5963	5963	
5°	5860	5853	5853	5846	5846	556
15°	5481	5481	5426	5370	5350	1541
25°	4750	4722	4647	4481	4357	2181
35°	3854	3826	3640	3364	3282	2409
45°	2958	2896	2647	2427	2330	2278
55°	2054	1992	1806	1592	1510	1843
65°	1220	1151	1041	1062	882	1203
75°	490	455	427	407	448	525
85°	69	76	83	90	96	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5963.4	5963.4	5963.4	5963.4	5963.4
2.5°	5922.0	5922.0	5922.0	5915.1	5915.1
5°	5860.0	5853.1	5853.1	5846.2	5846.2
7.5°	5811.7	5804.8	5797.9	5791.0	5777.2
10°	5742.8	5742.8	5735.9	5701.4	5694.5
12.5°	5632.5	5625.6	5598.0	5549.7	5536.0
15°	5480.8	5480.8	5425.7	5370.5	5349.8
17.5°	5315.3	5308.5	5239.5	5184.4	5156.8
20°	5136.1	5122.3	5053.4	4963.7	4915.5
22.5°	4936.2	4936.2	4853.4	4736.2	4688.0
25°	4750.0	4722.5	4646.6	4481.2	4357.1
27.5°	4536.3	4494.9	4412.2	4177.8	4033.0
30°	4301.9	4281.2	4164.0	3860.7	3750.4
32.5°	4081.3	4046.8	3922.7	3605.6	3516.0
35°	3853.8	3826.2	3640.1	3364.3	3281.6
37.5°	3626.3	3591.8	3357.4	3136.8	3033.4
40°	3398.8	3357.4	3102.3	2902.4	2792.1
42.5°	3185.1	3129.9	2881.7	2668.0	2543.9
45°	2957.6	2895.5	2647.3	2426.7	2330.2
47.5°	2730.1	2674.9	2447.4	2219.9	2109.6
50°	2488.8	2440.5	2233.7	2006.2	1889.0
52.5°	2288.8	2213.0	2013.1	1785.6	1689.1
55°	2054.4	1992.4	1806.3	1592.5	1509.8
57.5°	1840.7	1778.7	1606.3	1406.4	1337.5
60°	1640.8	1551.2	1406.4	1234.0	1178.9
62.5°	1420.2	1351.2	1227.1	1082.4	1151.3
65°	1220.3	1151.3	1041.0	1061.7	882.4
67.5°	999.6	965.2	868.7	772.1	744.6
70°	813.5	772.1	737.7	634.3	606.7
72.5°	648.0	606.7	558.4	503.3	482.6
75°	489.5	455.0	427.4	406.8	448.1
77.5°	337.8	324.0	303.3	282.7	275.8
80°	220.6	213.7	206.8	199.9	193.0
82.5°	131.0	131.0	131.0	131.0	131.0
85°	68.9	75.8	82.7	89.6	96.5
87.5°	41.4	41.4	48.3	55.2	62.0
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)