

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: P546682

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-80-87-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: P546682
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-LD4-2HI-35-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

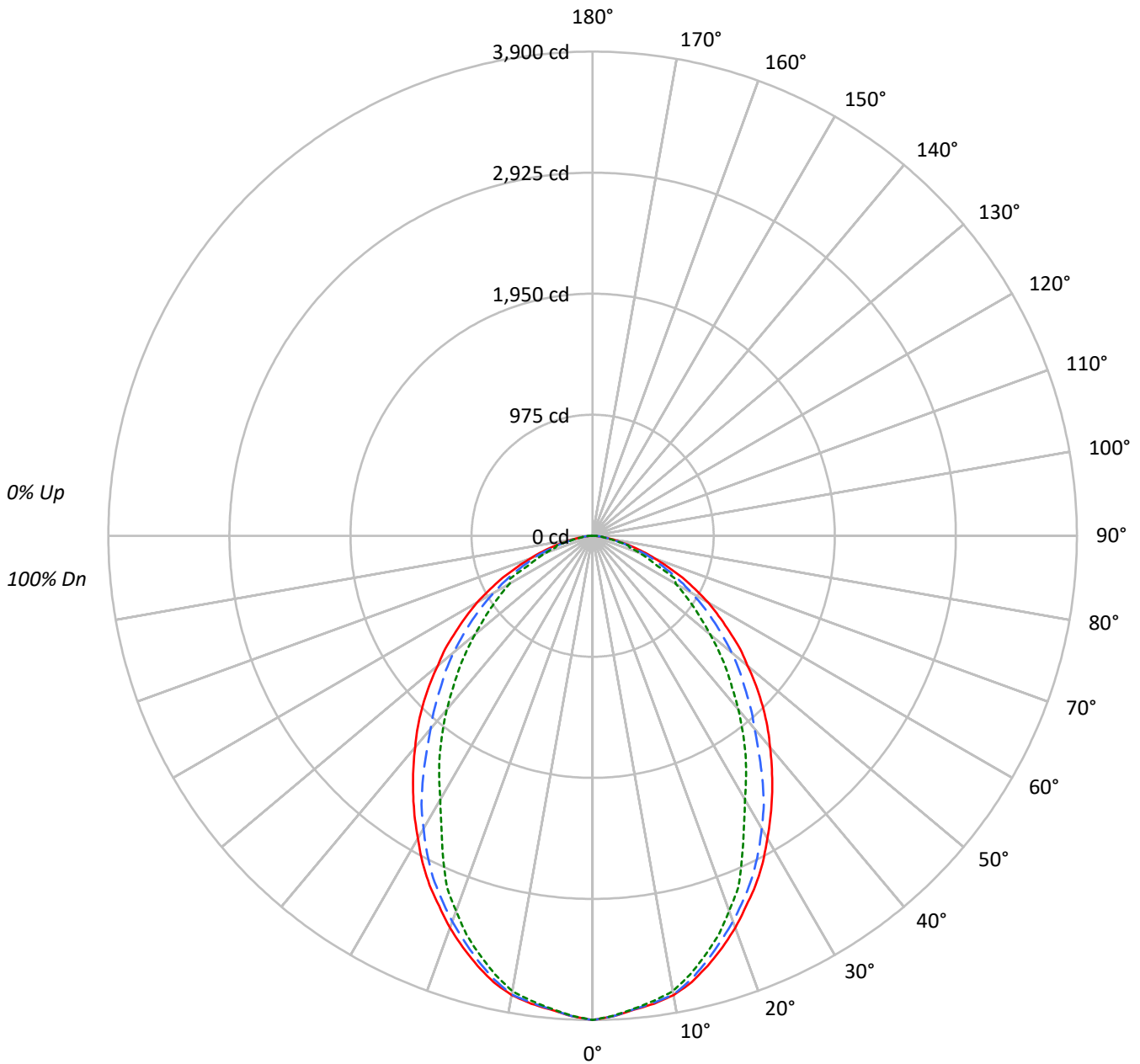
Lumens per Lamp: N/A
Luminaire Lumens: 7657.0 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	5248	5248	5248
5°	5177	5170	5164
10°	5132	5126	5089
15°	4993	4943	4874
20°	4810	4733	4603
25°	4612	4512	4231
30°	4371	4231	3811
35°	4140	3911	3525
40°	3905	3564	3208
45°	3681	3295	2900
50°	3407	3058	2586
55°	3152	2771	2316
60°	2888	2475	2075
65°	2541	2168	1838
70°	2093	1898	1561
75°	1664	1454	1524
80°	1118	1048	979
85°	696	835	974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.1	4.7
10°-20°	996.4	13.0
20°-30°	1379.5	18.0
30°-40°	1470.9	19.2
40°-50°	1341.9	17.5
50°-60°	1051.3	13.7
60°-70°	685.2	8.9
70°-80°	303.6	4.0
80°-90°	65.2	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°	2739.0	35.8
0°-40°	4209.9	55.0
0°-60°	6603.1	86.2
0°-90°	7657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3900	3900	3900	3900	3900	
5°	3833	3828	3828	3824	3824	364
15°	3585	3585	3549	3513	3499	1008
25°	3107	3089	3039	2931	2850	1426
35°	2521	2503	2381	2200	2146	1576
45°	1934	1894	1732	1587	1524	1490
55°	1344	1303	1181	1042	988	1205
65°	798	753	681	694	577	787
75°	320	298	280	266	293	343
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3900.4	3900.4	3900.4	3900.4	3900.4
2.5°	3873.3	3873.3	3873.3	3868.8	3868.8
5°	3832.7	3828.2	3828.2	3823.7	3823.7
7.5°	3801.2	3796.7	3792.2	3787.6	3778.6
10°	3756.1	3756.1	3751.6	3729.0	3724.5
12.5°	3683.9	3679.4	3661.4	3629.8	3620.8
15°	3584.7	3584.7	3548.7	3512.6	3499.1
17.5°	3476.5	3472.0	3426.9	3390.8	3372.8
20°	3359.3	3350.3	3305.2	3246.6	3215.0
22.5°	3228.5	3228.5	3174.4	3097.8	3066.2
25°	3106.8	3088.7	3039.1	2930.9	2849.8
27.5°	2967.0	2939.9	2885.8	2732.5	2637.8
30°	2813.7	2800.2	2723.5	2525.1	2453.0
32.5°	2669.4	2646.8	2565.7	2358.3	2299.6
35°	2520.6	2502.6	2380.8	2200.4	2146.3
37.5°	2371.8	2349.2	2195.9	2051.6	1984.0
40°	2223.0	2195.9	2029.1	1898.3	1826.2
42.5°	2083.2	2047.1	1884.8	1745.0	1663.9
45°	1934.4	1893.8	1731.5	1587.2	1524.1
47.5°	1785.6	1749.5	1600.7	1451.9	1379.8
50°	1627.8	1596.2	1460.9	1312.1	1235.5
52.5°	1497.0	1447.4	1316.7	1167.9	1104.7
55°	1343.7	1303.1	1181.4	1041.6	987.5
57.5°	1203.9	1163.3	1050.6	919.9	874.8
60°	1073.2	1014.5	919.9	807.1	771.1
62.5°	928.9	883.8	802.6	707.9	753.0
65°	798.1	753.0	680.9	694.4	577.2
67.5°	653.8	631.3	568.1	505.0	487.0
70°	532.1	505.0	482.5	414.8	396.8
72.5°	423.9	396.8	365.2	329.2	315.6
75°	320.1	297.6	279.6	266.0	293.1
77.5°	220.9	211.9	198.4	184.9	180.4
80°	144.3	139.8	135.3	130.8	126.3
82.5°	85.7	85.7	85.7	85.7	85.7
85°	45.1	49.6	54.1	58.6	63.1
87.5°	27.1	27.1	31.6	36.1	40.6
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)