

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: P546905

Luminaire Tested: **FMR-24-4-LD4-2STD-40-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: P546905
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-LD4-2STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

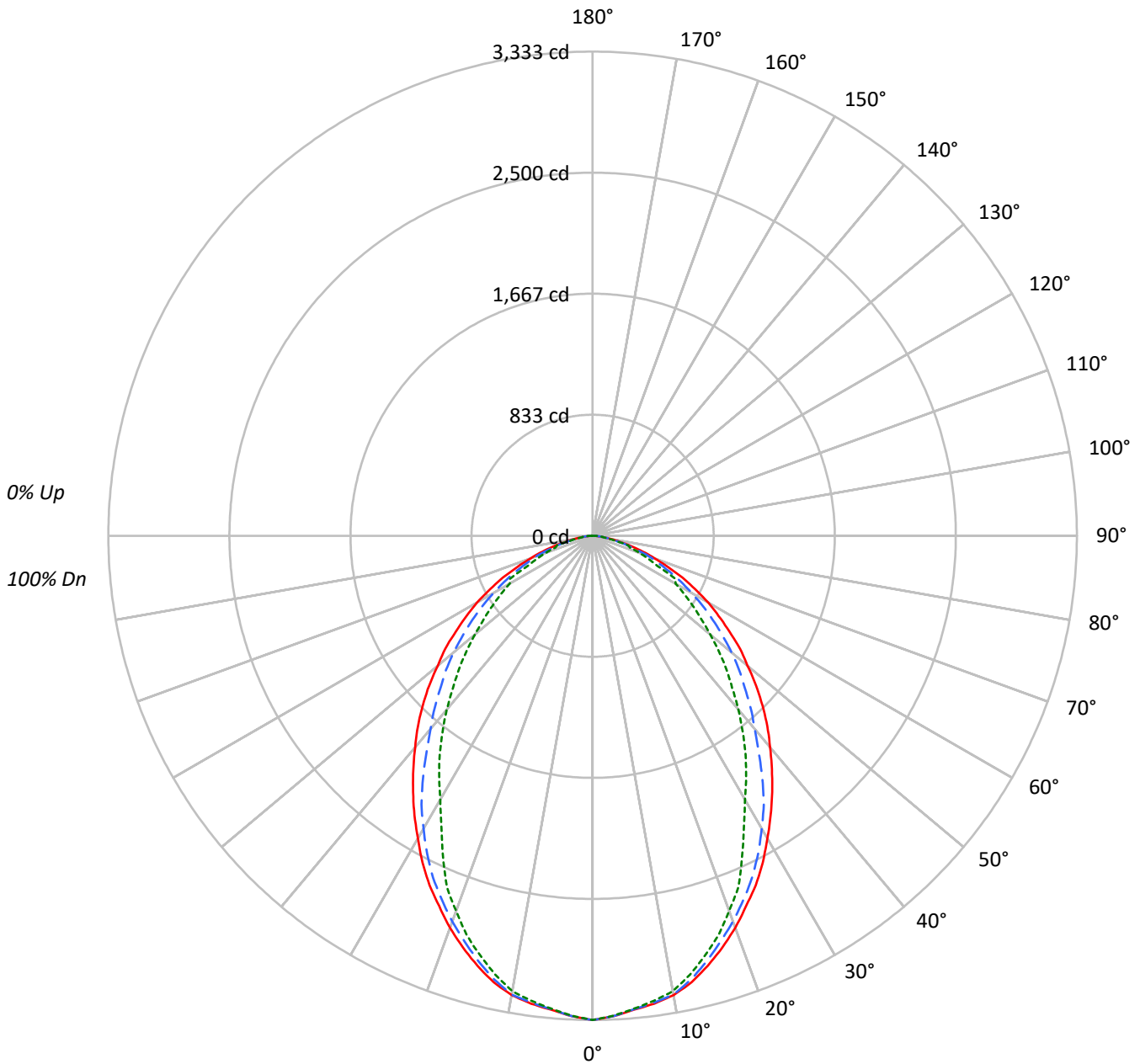
Lumens per Lamp: N/A
Luminaire Lumens: 6544.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4485	4485	4485
5°	4424	4419	4414
10°	4386	4381	4349
15°	4268	4225	4165
20°	4111	4045	3934
25°	3942	3856	3616
30°	3736	3616	3257
35°	3538	3342	3013
40°	3337	3046	2741
45°	3146	2816	2478
50°	2912	2614	2210
55°	2694	2369	1980
60°	2468	2115	1773
65°	2172	1853	1571
70°	1789	1622	1334
75°	1422	1242	1302
80°	955	896	836
85°	594	713	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.3	4.7
10°-20°	851.6	13.0
20°-30°	1179.0	18.0
30°-40°	1257.1	19.2
40°-50°	1146.9	17.5
50°-60°	898.5	13.7
60°-70°	585.6	8.9
70°-80°	259.4	4.0
80°-90°	55.7	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°	2340.8	35.8
0°-40°	3598.0	55.0
0°-60°	5643.3	86.2
0°-90°	6544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6544.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3333	3333	3333	3333	3333	
5°	3276	3272	3272	3268	3268	311
15°	3064	3064	3033	3002	2990	861
25°	2655	2640	2597	2505	2436	1219
35°	2154	2139	2035	1881	1834	1347
45°	1653	1618	1480	1356	1302	1273
55°	1148	1114	1010	890	844	1030
65°	682	644	582	594	493	672
75°	274	254	239	227	250	293
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3333.4	3333.4	3333.4	3333.4	3333.4
2.5°	3310.3	3310.3	3310.3	3306.5	3306.5
5°	3275.6	3271.8	3271.8	3267.9	3267.9
7.5°	3248.6	3244.8	3240.9	3237.1	3229.4
10°	3210.1	3210.1	3206.3	3187.0	3183.1
12.5°	3148.4	3144.6	3129.2	3102.2	3094.5
15°	3063.7	3063.7	3032.8	3002.0	2990.4
17.5°	2971.2	2967.3	2928.8	2898.0	2882.5
20°	2871.0	2863.3	2824.7	2774.6	2747.7
22.5°	2759.2	2759.2	2713.0	2647.5	2620.5
25°	2655.2	2639.8	2597.4	2504.9	2435.5
27.5°	2535.7	2512.6	2466.3	2335.3	2254.4
30°	2404.7	2393.1	2327.6	2158.1	2096.4
32.5°	2281.4	2262.1	2192.7	2015.5	1965.4
35°	2154.2	2138.8	2034.7	1880.6	1834.3
37.5°	2027.0	2007.8	1876.7	1753.4	1695.6
40°	1899.9	1876.7	1734.2	1622.4	1560.7
42.5°	1780.4	1749.6	1610.8	1491.4	1422.0
45°	1653.2	1618.5	1479.8	1356.5	1302.5
47.5°	1526.1	1495.2	1368.1	1240.9	1179.2
50°	1391.2	1364.2	1248.6	1121.4	1055.9
52.5°	1279.4	1237.0	1125.3	998.1	944.1
55°	1148.4	1113.7	1009.7	890.2	844.0
57.5°	1028.9	994.2	897.9	786.1	747.6
60°	917.2	867.1	786.1	689.8	659.0
62.5°	793.9	755.3	686.0	605.0	643.6
65°	682.1	643.6	581.9	593.5	493.3
67.5°	558.8	539.5	485.6	431.6	416.2
70°	454.7	431.6	412.3	354.5	339.1
72.5°	362.2	339.1	312.1	281.3	269.8
75°	273.6	254.3	238.9	227.4	250.5
77.5°	188.8	181.1	169.6	158.0	154.1
80°	123.3	119.5	115.6	111.8	107.9
82.5°	73.2	73.2	73.2	73.2	73.2
85°	38.5	42.4	46.2	50.1	54.0
87.5°	23.1	23.1	27.0	30.8	34.7
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)