

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: P546896

Luminaire Tested: **FMR-24-4-LD4-2STD-35-UNV-93-85-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: P546896
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-35-UNV-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

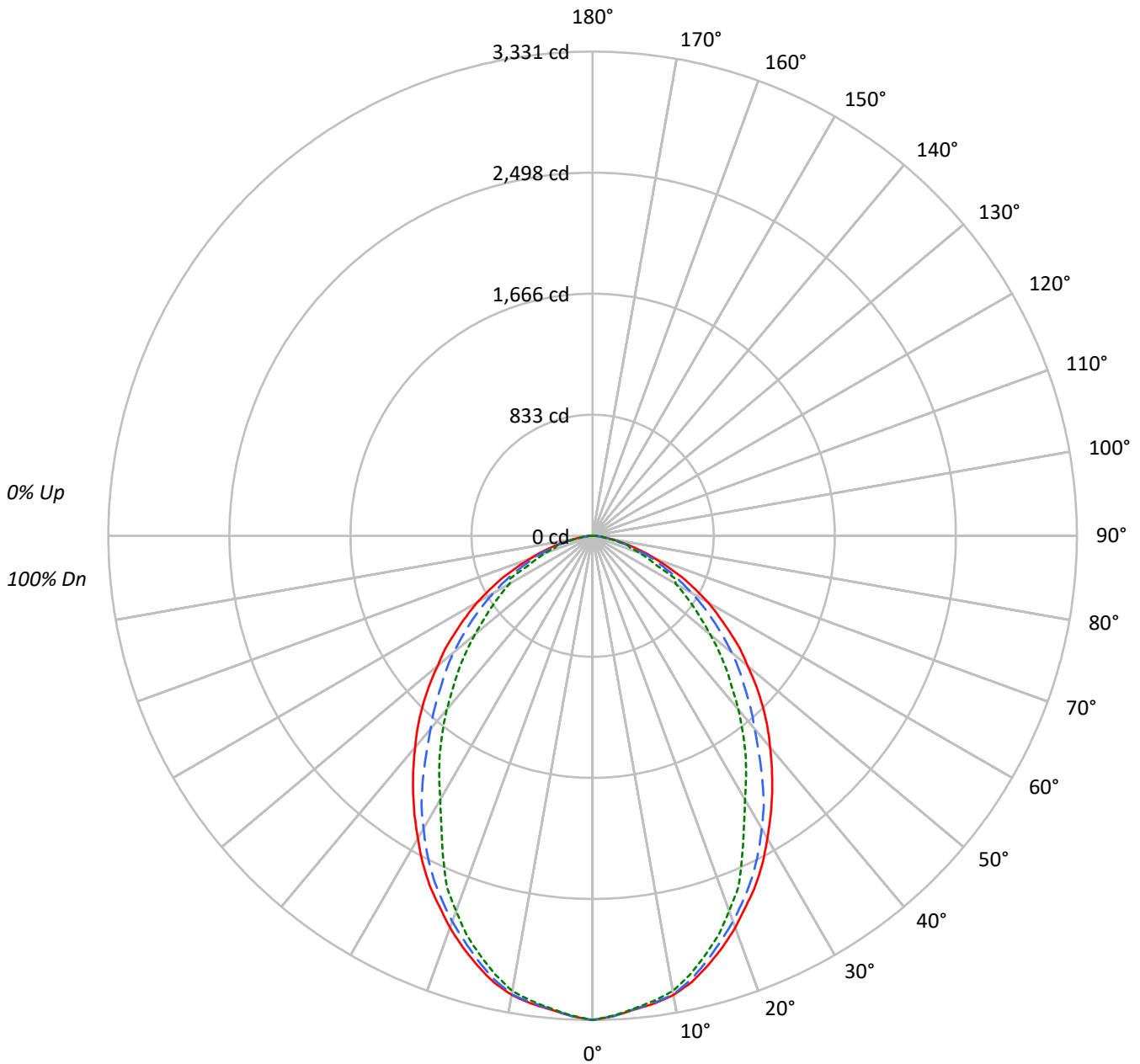
Lumens per Lamp: N/A
Luminaire Lumens: 6539.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4482	4482	4482
5°	4421	4416	4410
10°	4383	4377	4346
15°	4264	4221	4162
20°	4108	4042	3931
25°	3939	3853	3613
30°	3733	3613	3255
35°	3536	3340	3011
40°	3334	3044	2739
45°	3143	2814	2477
50°	2910	2611	2209
55°	2692	2367	1978
60°	2466	2114	1772
65°	2170	1851	1569
70°	1788	1621	1333
75°	1421	1241	1301
80°	955	895	835
85°	594	713	832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.1	4.7
10°-20°	850.9	13.0
20°-30°	1178.1	18.0
30°-40°	1256.2	19.2
40°-50°	1146.0	17.5
50°-60°	897.8	13.7
60°-70°	585.1	8.9
70°-80°	259.2	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°	2339.1	35.8
0°-40°	3595.2	55.0
0°-60°	5639.0	86.2
0°-90°	6539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3331	3331	3331	3331	3331	
5°	3273	3269	3269	3265	3265	311
15°	3061	3061	3030	3000	2988	861
25°	2653	2638	2595	2503	2434	1218
35°	2153	2137	2033	1879	1833	1346
45°	1652	1617	1479	1356	1302	1272
55°	1148	1113	1009	890	843	1029
65°	682	643	582	593	493	672
75°	273	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°	3330.9	3330.9	3330.9	3330.9	3330.9
2.5°	3307.8	3307.8	3307.8	3303.9	3303.9
5°	3273.1	3269.3	3269.3	3265.4	3265.4
7.5°	3246.2	3242.3	3238.5	3234.6	3226.9
10°	3207.7	3207.7	3203.8	3184.6	3180.7
12.5°	3146.0	3142.2	3126.8	3099.8	3092.1
15°	3061.3	3061.3	3030.5	2999.7	2988.2
17.5°	2968.9	2965.1	2926.6	2895.7	2880.3
20°	2868.8	2861.1	2822.6	2772.5	2745.6
22.5°	2757.1	2757.1	2710.9	2645.4	2618.5
25°	2653.2	2637.7	2595.4	2503.0	2433.7
27.5°	2533.8	2510.7	2464.5	2333.5	2252.7
30°	2402.9	2391.3	2325.8	2156.4	2094.8
32.5°	2279.6	2260.4	2191.1	2013.9	1963.9
35°	2152.6	2137.2	2033.2	1879.2	1832.9
37.5°	2025.5	2006.2	1875.3	1752.1	1694.3
40°	1898.4	1875.3	1732.8	1621.2	1559.5
42.5°	1779.0	1748.2	1609.6	1490.2	1420.9
45°	1652.0	1617.3	1478.7	1355.5	1301.5
47.5°	1524.9	1494.1	1367.0	1239.9	1178.3
50°	1390.1	1363.2	1247.6	1120.6	1055.1
52.5°	1278.4	1236.1	1124.4	997.3	943.4
55°	1147.5	1112.9	1008.9	889.5	843.3
57.5°	1028.1	993.5	897.2	785.5	747.0
60°	916.5	866.4	785.5	689.3	658.5
62.5°	793.2	754.7	685.4	604.6	643.1
65°	681.6	643.1	581.5	593.0	492.9
67.5°	558.4	539.1	485.2	431.3	415.9
70°	454.4	431.3	412.0	354.3	338.9
72.5°	362.0	338.9	311.9	281.1	269.6
75°	273.4	254.1	238.7	227.2	250.3
77.5°	188.7	181.0	169.4	157.9	154.0
80°	123.2	119.4	115.5	111.7	107.8
82.5°	73.2	73.2	73.2	73.2	73.2
85°	38.5	42.4	46.2	50.1	53.9
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)