

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: P546878

Luminaire Tested: **FMR-24-4-LD4-2STD-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: P546878
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-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

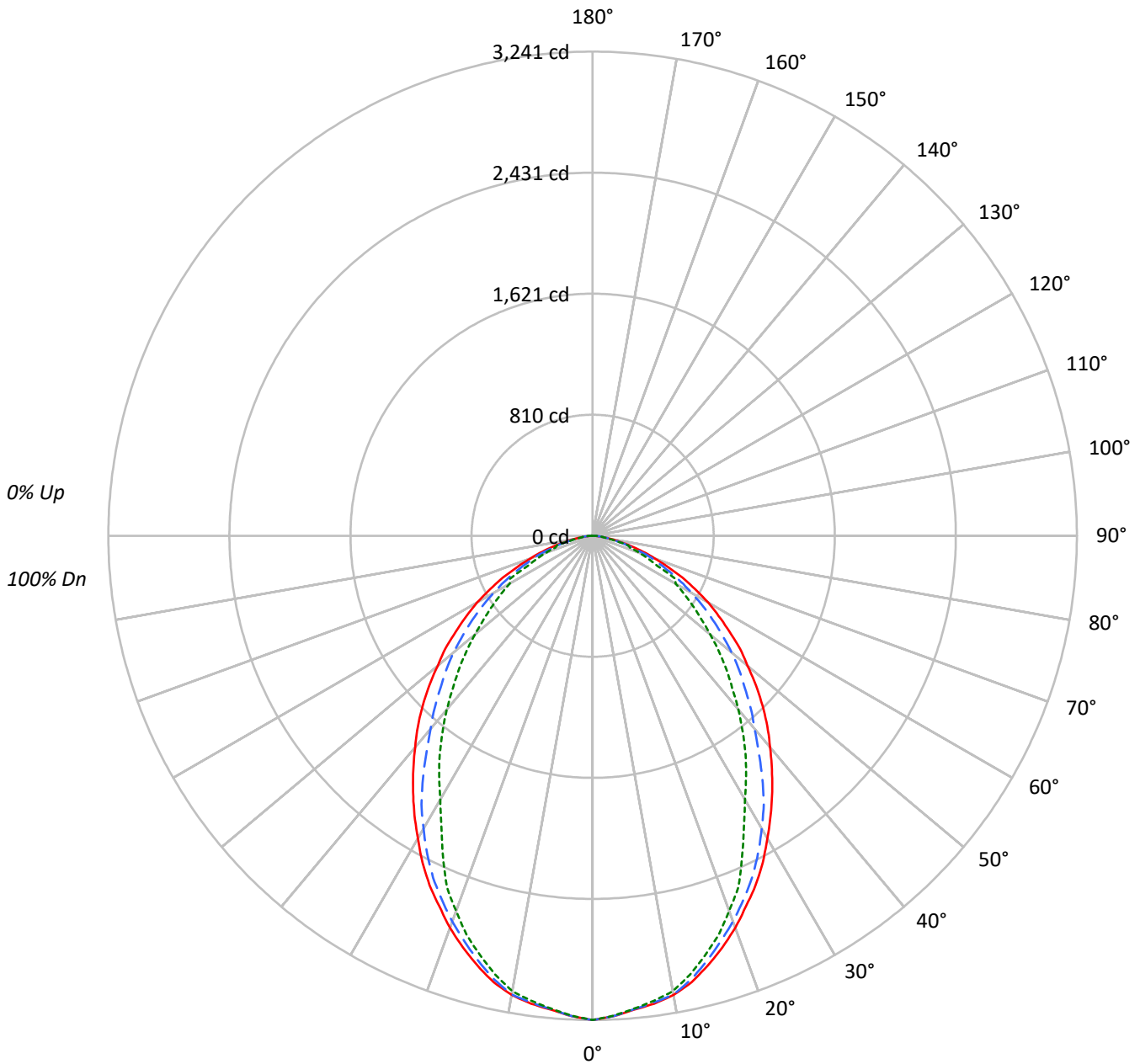
Lumens per Lamp: N/A
Luminaire Lumens: 6363.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4361	4361	4361
5°	4302	4297	4292
10°	4264	4259	4229
15°	4149	4108	4050
20°	3997	3933	3825
25°	3833	3749	3516
30°	3633	3516	3167
35°	3440	3250	2930
40°	3245	2962	2666
45°	3059	2738	2410
50°	2831	2541	2149
55°	2619	2303	1925
60°	2400	2057	1724
65°	2111	1801	1527
70°	1740	1577	1297
75°	1383	1208	1266
80°	929	871	813
85°	579	695	810



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.7	4.7
10°-20°	828.0	13.0
20°-30°	1146.3	18.0
30°-40°	1222.3	19.2
40°-50°	1115.1	17.5
50°-60°	873.6	13.7
60°-70°	569.4	8.9
70°-80°	252.3	4.0
80°-90°	54.2	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°	2276.1	35.8
0°-40°	3498.4	55.0
0°-60°	5487.2	86.2
0°-90°	6363.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6363.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3241	3241	3241	3241	3241	
5°	3185	3181	3181	3178	3178	302
15°	2979	2979	2949	2919	2908	837
25°	2582	2567	2526	2436	2368	1185
35°	2095	2080	1978	1829	1784	1310
45°	1608	1574	1439	1319	1266	1238
55°	1117	1083	982	866	821	1002
65°	663	626	566	577	480	654
75°	266	247	232	221	244	285
85°	38	41	45	49	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3241.2	3241.2	3241.2	3241.2	3241.2
2.5°	3218.7	3218.7	3218.7	3215.0	3215.0
5°	3185.0	3181.3	3181.3	3177.5	3177.5
7.5°	3158.8	3155.0	3151.3	3147.6	3140.1
10°	3121.3	3121.3	3117.6	3098.8	3095.1
12.5°	3061.4	3057.6	3042.6	3016.4	3008.9
15°	2978.9	2978.9	2949.0	2919.0	2907.7
17.5°	2889.0	2885.3	2847.8	2817.8	2802.8
20°	2791.6	2784.1	2746.6	2697.9	2671.7
22.5°	2682.9	2682.9	2637.9	2574.2	2548.0
25°	2581.7	2566.8	2525.5	2435.6	2368.2
27.5°	2465.6	2443.1	2398.1	2270.7	2192.0
30°	2338.2	2326.9	2263.2	2098.4	2038.4
32.5°	2218.3	2199.5	2132.1	1959.7	1911.0
35°	2094.6	2079.6	1978.5	1828.6	1783.6
37.5°	1971.0	1952.2	1824.8	1704.9	1648.7
40°	1847.3	1824.8	1686.2	1577.5	1517.6
42.5°	1731.2	1701.2	1566.3	1450.1	1382.7
45°	1607.5	1573.8	1438.9	1319.0	1266.5
47.5°	1483.8	1453.9	1330.2	1206.6	1146.6
50°	1352.7	1326.5	1214.1	1090.4	1026.7
52.5°	1244.0	1202.8	1094.1	970.5	918.0
55°	1116.6	1082.9	981.7	865.6	820.6
57.5°	1000.5	966.7	873.1	764.4	726.9
60°	891.8	843.1	764.4	670.7	640.8
62.5°	771.9	734.4	667.0	588.3	625.8
65°	663.2	625.8	565.8	577.1	479.6
67.5°	543.3	524.6	472.1	419.7	404.7
70°	442.2	419.7	400.9	344.7	329.7
72.5°	352.2	329.7	303.5	273.5	262.3
75°	266.0	247.3	232.3	221.1	243.6
77.5°	183.6	176.1	164.9	153.6	149.9
80°	119.9	116.2	112.4	108.7	104.9
82.5°	71.2	71.2	71.2	71.2	71.2
85°	37.5	41.2	45.0	48.7	52.5
87.5°	22.5	22.5	26.2	30.0	33.7
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)