

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: P546927

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-93-84-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: P546927
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-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

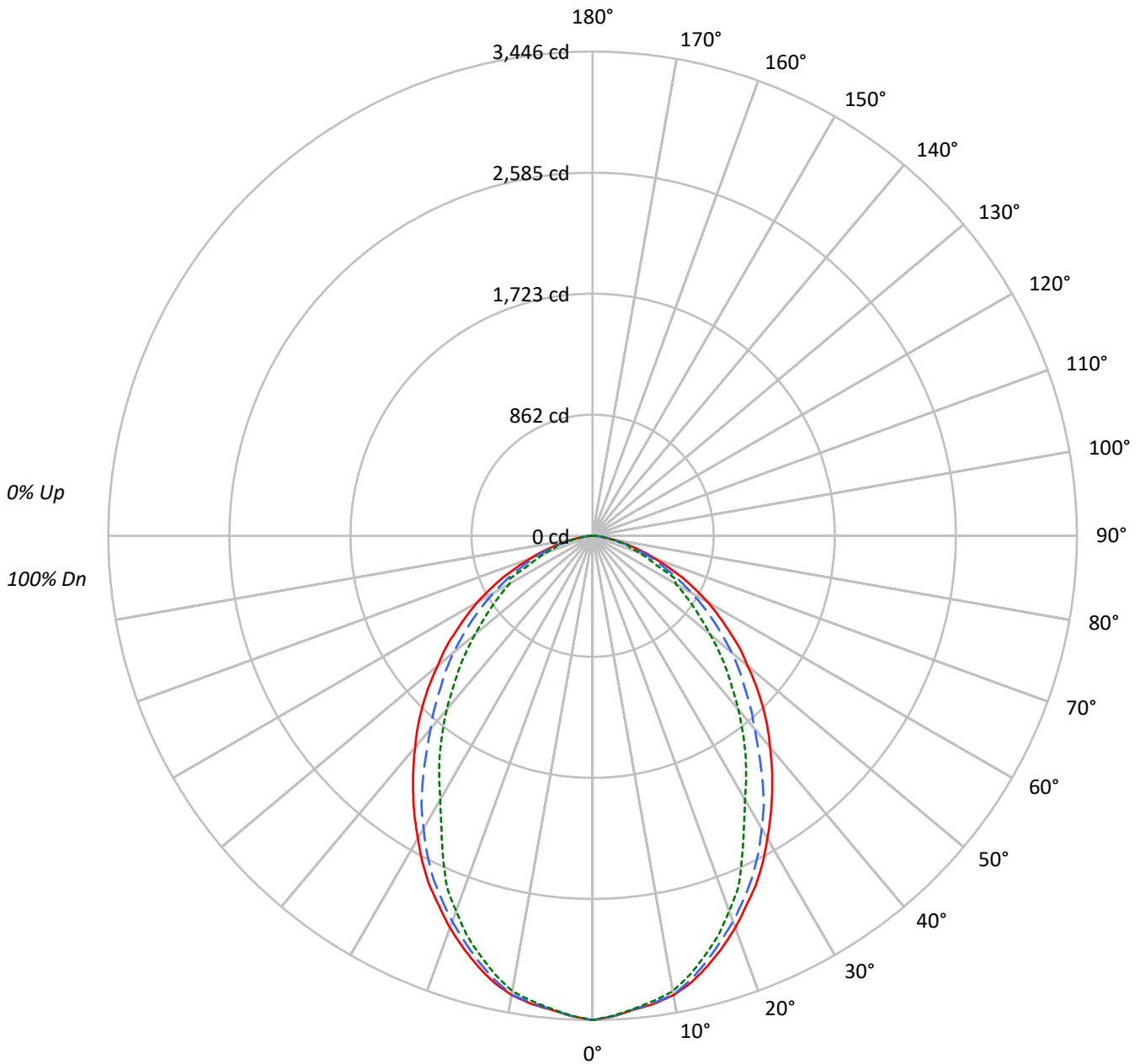
Lumens per Lamp: N/A
Luminaire Lumens: 6766.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4637	4637	4637
5°	4574	4569	4564
10°	4535	4529	4496
15°	4412	4368	4307
20°	4250	4182	4068
25°	4076	3987	3738
30°	3863	3739	3368
35°	3658	3456	3115
40°	3450	3149	2834
45°	3252	2911	2563
50°	3011	2702	2285
55°	2785	2449	2047
60°	2552	2187	1833
65°	2245	1915	1624
70°	1850	1677	1379
75°	1471	1284	1346
80°	988	926	865
85°	614	738	861



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.8	4.7
10°-20°	880.5	13.0
20°-30°	1219.0	18.0
30°-40°	1299.8	19.2
40°-50°	1185.8	17.5
50°-60°	929.0	13.7
60°-70°	605.4	8.9
70°-80°	268.2	4.0
80°-90°	57.6	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°	2420.3	35.8
0°-40°	3720.0	55.0
0°-60°	5834.7	86.2
0°-90°	6766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3446	3446	3446	3446	3446	
5°	3387	3383	3383	3379	3379	321
15°	3168	3168	3136	3104	3092	891
25°	2745	2729	2686	2590	2518	1260
35°	2227	2211	2104	1944	1897	1392
45°	1709	1673	1530	1402	1347	1317
55°	1187	1152	1044	920	873	1065
65°	705	665	602	614	510	695
75°	283	263	247	235	259	303
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3446.5	3446.5	3446.5	3446.5	3446.5
2.5°	3422.6	3422.6	3422.6	3418.6	3418.6
5°	3386.7	3382.8	3382.8	3378.8	3378.8
7.5°	3358.9	3354.9	3350.9	3346.9	3338.9
10°	3319.0	3319.0	3315.0	3295.1	3291.1
12.5°	3255.3	3251.3	3235.3	3207.4	3199.5
15°	3167.6	3167.6	3135.7	3103.9	3091.9
17.5°	3072.0	3068.0	3028.1	2996.3	2980.3
20°	2968.4	2960.4	2920.6	2868.8	2840.9
22.5°	2852.8	2852.8	2805.0	2737.3	2709.4
25°	2745.3	2729.3	2685.5	2589.9	2518.1
27.5°	2621.7	2597.8	2550.0	2414.5	2330.9
30°	2486.3	2474.3	2406.6	2231.3	2167.5
32.5°	2358.8	2338.8	2267.1	2083.8	2032.0
35°	2227.3	2211.3	2103.8	1944.4	1896.6
37.5°	2095.8	2075.9	1940.4	1812.9	1753.1
40°	1964.3	1940.4	1793.0	1677.4	1613.7
42.5°	1840.8	1808.9	1665.5	1542.0	1470.2
45°	1709.3	1673.4	1530.0	1402.5	1346.7
47.5°	1577.8	1545.9	1414.5	1283.0	1219.2
50°	1438.4	1410.5	1290.9	1159.5	1091.7
52.5°	1322.8	1279.0	1163.4	1032.0	976.2
55°	1187.4	1151.5	1043.9	920.4	872.6
57.5°	1063.8	1028.0	928.4	812.8	773.0
60°	948.3	896.5	812.8	713.2	681.3
62.5°	820.8	780.9	709.2	625.6	665.4
65°	705.2	665.4	601.6	613.6	510.0
67.5°	577.7	557.8	502.0	446.3	430.3
70°	470.2	446.3	426.3	366.6	350.6
72.5°	374.5	350.6	322.7	290.9	278.9
75°	282.9	263.0	247.0	235.1	259.0
77.5°	195.2	187.3	175.3	163.4	159.4
80°	127.5	123.5	119.5	115.5	111.6
82.5°	75.7	75.7	75.7	75.7	75.7
85°	39.8	43.8	47.8	51.8	55.8
87.5°	23.9	23.9	27.9	31.9	35.9
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)