

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: P546966

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-93-97-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: P546966
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-50-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

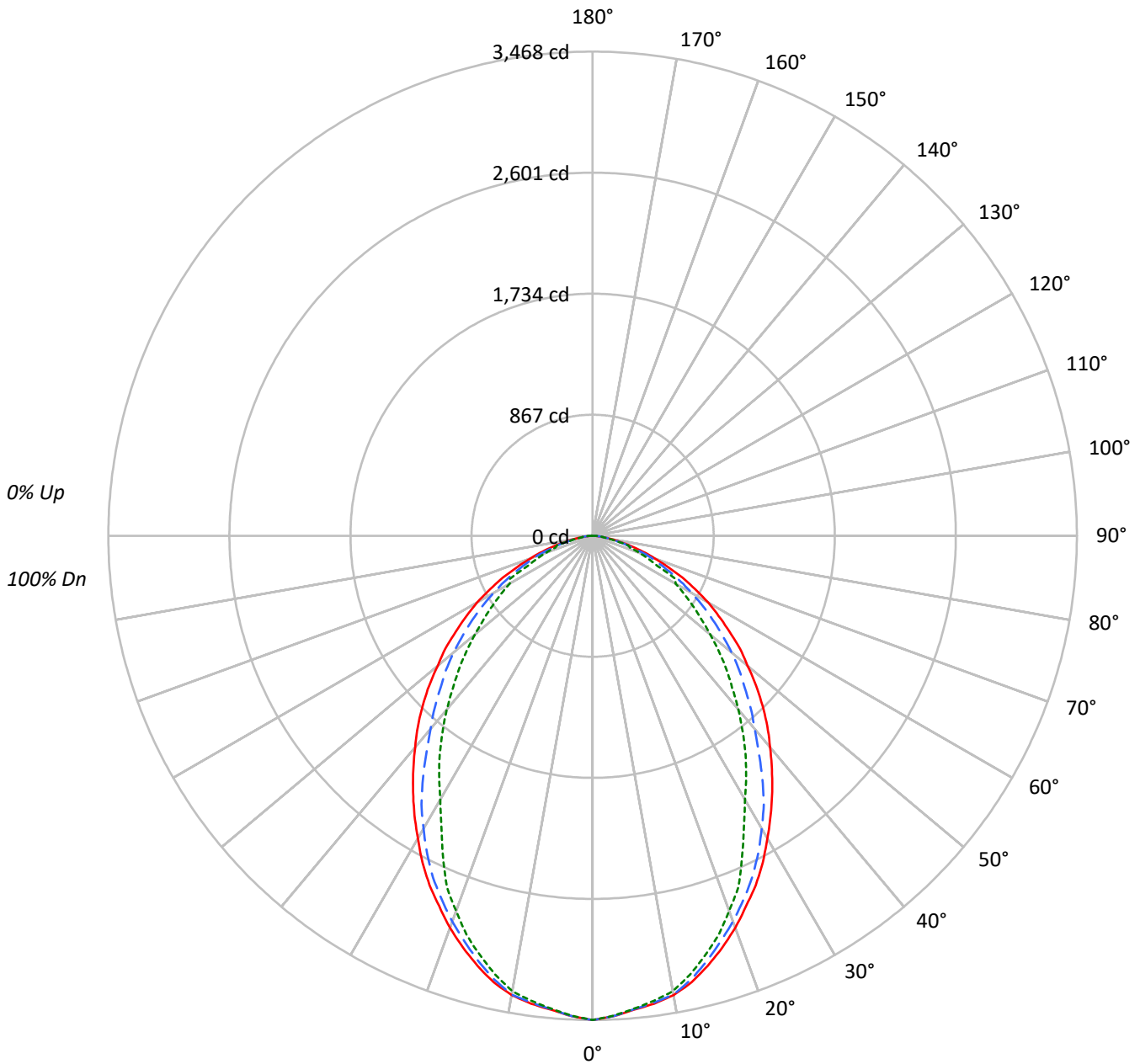
Lumens per Lamp: N/A
Luminaire Lumens: 6809.0 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (A_{in}): 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				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4667	4667	4667
5°	4603	4598	4592
10°	4563	4558	4525
15°	4440	4396	4334
20°	4277	4208	4093
25°	4101	4012	3762
30°	3887	3763	3389
35°	3682	3477	3135
40°	3472	3169	2852
45°	3273	2930	2579
50°	3030	2719	2300
55°	2803	2464	2060
60°	2568	2201	1845
65°	2259	1928	1634
70°	1861	1688	1388
75°	1480	1292	1355
80°	994	932	870
85°	619	743	866



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.9	4.7
10°-20°	886.1	13.0
20°-30°	1226.7	18.0
30°-40°	1308.0	19.2
40°-50°	1193.3	17.5
50°-60°	934.8	13.7
60°-70°	609.3	8.9
70°-80°	269.9	4.0
80°-90°	58.0	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°	2435.6	35.8
0°-40°	3743.6	55.0
0°-60°	5871.8	86.2
0°-90°	6809.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6809.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3468	3468	3468	3468	3468	
5°	3408	3404	3404	3400	3400	324
15°	3188	3188	3156	3124	3112	896
25°	2763	2747	2703	2606	2534	1268
35°	2241	2225	2117	1957	1909	1401
45°	1720	1684	1540	1411	1355	1325
55°	1195	1159	1050	926	878	1072
65°	710	670	606	618	513	699
75°	285	265	249	237	261	305
85°	40	44	48	52	56	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3468.4	3468.4	3468.4	3468.4	3468.4
2.5°	3444.4	3444.4	3444.4	3440.3	3440.3
5°	3408.3	3404.3	3404.3	3400.2	3400.2
7.5°	3380.2	3376.2	3372.2	3368.2	3360.2
10°	3340.1	3340.1	3336.1	3316.0	3312.0
12.5°	3275.9	3271.9	3255.9	3227.8	3219.8
15°	3187.7	3187.7	3155.7	3123.6	3111.5
17.5°	3091.5	3087.5	3047.4	3015.3	2999.3
20°	2987.2	2979.2	2939.1	2887.0	2858.9
22.5°	2871.0	2871.0	2822.8	2754.7	2726.6
25°	2762.7	2746.7	2702.6	2606.3	2534.1
27.5°	2638.4	2614.3	2566.2	2429.9	2345.7
30°	2502.1	2490.0	2421.9	2245.4	2181.3
32.5°	2373.8	2353.7	2281.5	2097.1	2045.0
35°	2241.4	2225.4	2117.1	1956.7	1908.6
37.5°	2109.1	2089.1	1952.7	1824.4	1764.3
40°	1976.8	1952.7	1804.4	1688.1	1623.9
42.5°	1852.5	1820.4	1676.1	1551.8	1479.6
45°	1720.2	1684.1	1539.7	1411.4	1355.3
47.5°	1587.9	1555.8	1423.5	1291.1	1227.0
50°	1447.5	1419.4	1299.2	1166.8	1098.7
52.5°	1331.2	1287.1	1170.8	1038.5	982.4
55°	1194.9	1158.8	1050.5	926.2	878.1
57.5°	1070.6	1034.5	934.3	818.0	777.9
60°	954.3	902.2	818.0	717.7	685.7
62.5°	826.0	785.9	713.7	629.5	669.6
65°	709.7	669.6	605.5	617.5	513.2
67.5°	581.4	561.4	505.2	449.1	433.1
70°	473.1	449.1	429.0	368.9	352.9
72.5°	376.9	352.9	324.8	292.7	280.7
75°	284.7	264.6	248.6	236.6	260.6
77.5°	196.5	188.5	176.4	164.4	160.4
80°	128.3	124.3	120.3	116.3	112.3
82.5°	76.2	76.2	76.2	76.2	76.2
85°	40.1	44.1	48.1	52.1	56.1
87.5°	24.1	24.1	28.1	32.1	36.1
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)