

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: P546861

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-82-96-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: P546861
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-LD4-2LO-50-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

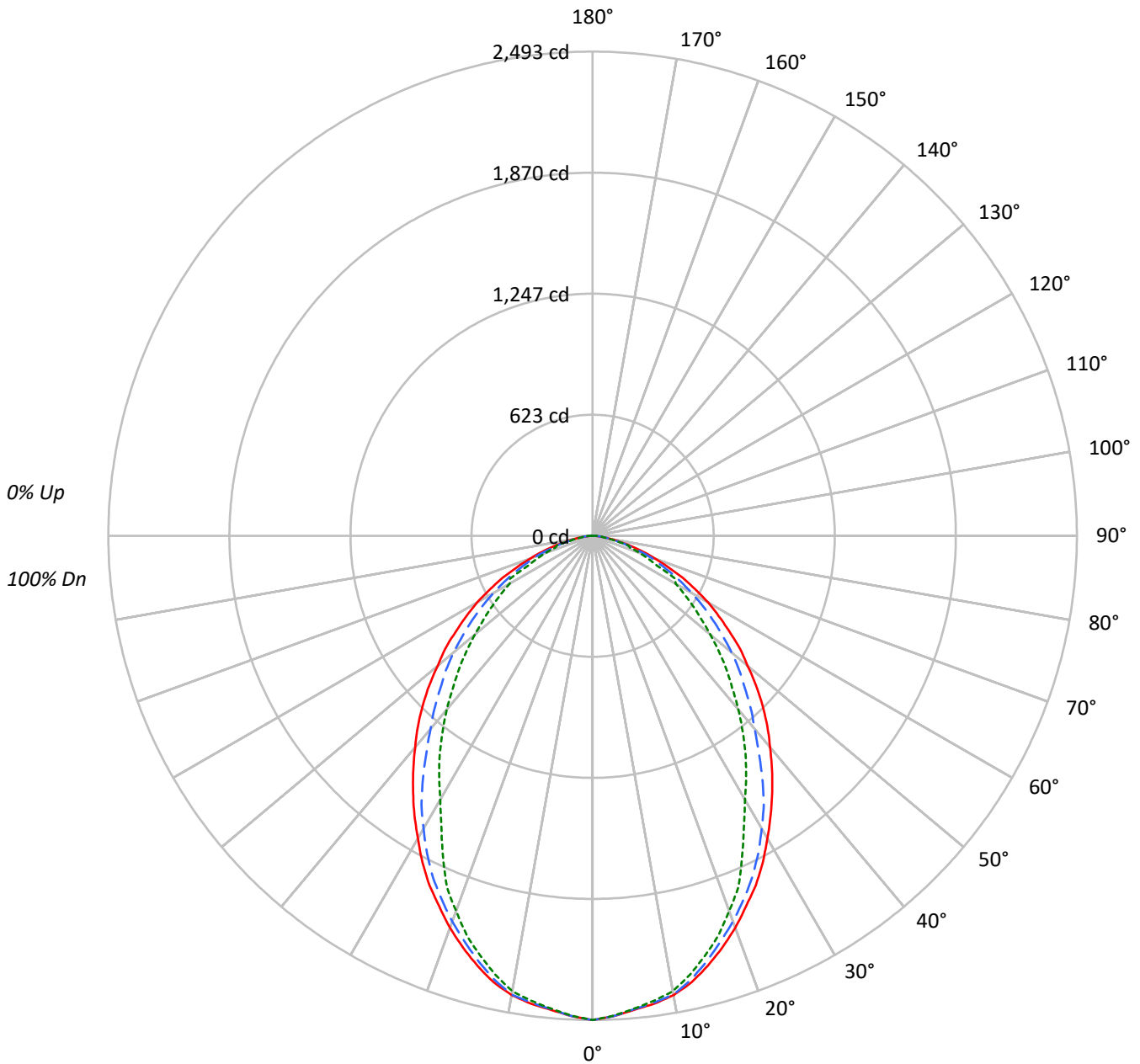
Lumens per Lamp: N/A
Luminaire Lumens: 4895.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3355	3355	3355
5°	3309	3305	3301
10°	3281	3277	3253
15°	3192	3160	3116
20°	3075	3025	2943
25°	2949	2884	2705
30°	2795	2705	2436
35°	2647	2500	2254
40°	2496	2278	2051
45°	2353	2106	1854
50°	2178	1955	1653
55°	2015	1772	1481
60°	1846	1583	1326
65°	1624	1386	1175
70°	1338	1213	998
75°	1064	929	974
80°	714	670	625
85°	445	534	624



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.1	4.7
10°-20°	637.0	13.0
20°-30°	881.9	18.0
30°-40°	940.3	19.2
40°-50°	857.9	17.5
50°-60°	672.1	13.7
60°-70°	438.0	8.9
70°-80°	194.1	4.0
80°-90°	41.7	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°	1751.0	35.8
0°-40°	2691.3	55.0
0°-60°	4221.2	86.2
0°-90°	4895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2493	2493	2493	2493	2493	
5°	2450	2447	2447	2444	2444	233
15°	2292	2292	2269	2246	2237	644
25°	1986	1975	1943	1874	1822	912
35°	1611	1600	1522	1407	1372	1007
45°	1237	1211	1107	1015	974	953
55°	859	833	755	666	631	770
65°	510	481	435	444	369	503
75°	205	190	179	170	187	219
85°	29	32	35	38	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2493.4	2493.4	2493.4	2493.4	2493.4
2.5°	2476.2	2476.2	2476.2	2473.3	2473.3
5°	2450.2	2447.3	2447.3	2444.4	2444.4
7.5°	2430.0	2427.1	2424.3	2421.4	2415.6
10°	2401.2	2401.2	2398.3	2383.9	2381.0
12.5°	2355.1	2352.2	2340.7	2320.5	2314.7
15°	2291.7	2291.7	2268.6	2245.5	2236.9
17.5°	2222.5	2219.6	2190.8	2167.7	2156.2
20°	2147.5	2141.8	2112.9	2075.5	2055.3
22.5°	2063.9	2063.9	2029.3	1980.3	1960.2
25°	1986.1	1974.6	1942.9	1873.7	1821.8
27.5°	1896.7	1879.5	1844.9	1746.9	1686.3
30°	1798.7	1790.1	1741.1	1614.3	1568.1
32.5°	1706.5	1692.1	1640.2	1507.6	1470.1
35°	1611.4	1599.8	1522.0	1406.7	1372.1
37.5°	1516.2	1501.8	1403.8	1311.6	1268.3
40°	1421.1	1403.8	1297.2	1213.6	1167.5
42.5°	1331.8	1308.7	1204.9	1115.6	1063.7
45°	1236.6	1210.7	1106.9	1014.7	974.3
47.5°	1141.5	1118.4	1023.3	928.2	882.1
50°	1040.6	1020.4	934.0	838.8	789.8
52.5°	957.0	925.3	841.7	746.6	706.2
55°	859.0	833.1	755.2	665.9	631.3
57.5°	769.7	743.7	671.6	588.1	559.2
60°	686.1	648.6	588.1	516.0	492.9
62.5°	593.8	565.0	513.1	452.6	481.4
65°	510.2	481.4	435.3	443.9	369.0
67.5°	418.0	403.6	363.2	322.9	311.3
70°	340.1	322.9	308.4	265.2	253.7
72.5°	271.0	253.7	233.5	210.4	201.8
75°	204.7	190.3	178.7	170.1	187.4
77.5°	141.2	135.5	126.8	118.2	115.3
80°	92.2	89.4	86.5	83.6	80.7
82.5°	54.8	54.8	54.8	54.8	54.8
85°	28.8	31.7	34.6	37.5	40.4
87.5°	17.3	17.3	20.2	23.1	25.9
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)