

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: P546793

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-82-86-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: P546793
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-35-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

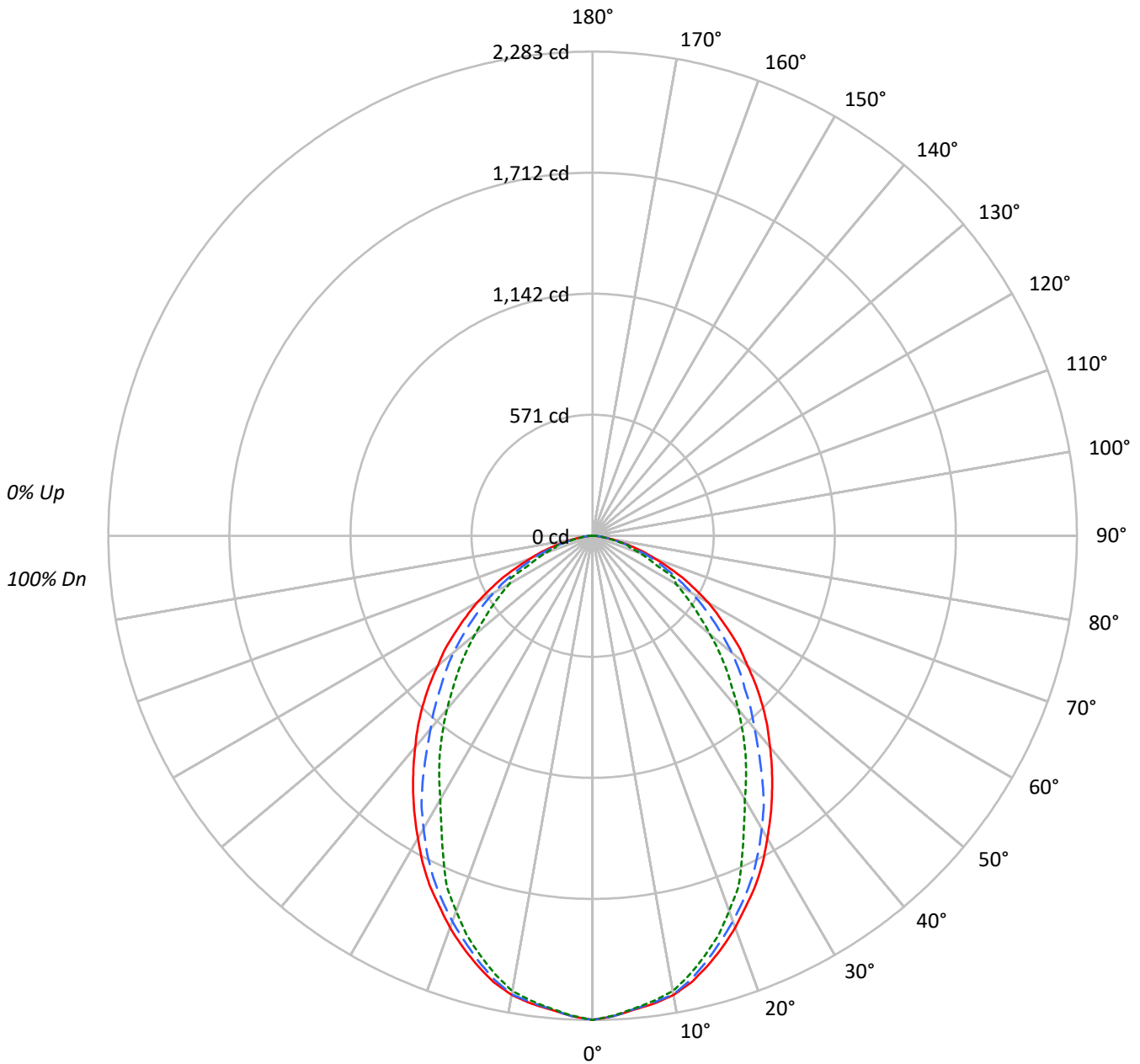
Lumens per Lamp: N/A
Luminaire Lumens: 4481.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P546793

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-82-86-EDD

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°	3071	3071	3071
5°	3029	3026	3022
10°	3003	3000	2978
15°	2922	2893	2852
20°	2815	2769	2694
25°	2699	2640	2476
30°	2558	2476	2230
35°	2423	2289	2063
40°	2285	2086	1877
45°	2154	1928	1697
50°	1994	1790	1513
55°	1845	1622	1356
60°	1690	1449	1214
65°	1487	1269	1075
70°	1225	1111	913
75°	974	850	892
80°	654	614	573
85°	408	489	570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.5	4.7
10°-20°	583.1	13.0
20°-30°	807.3	18.0
30°-40°	860.8	19.2
40°-50°	785.3	17.5
50°-60°	615.2	13.7
60°-70°	401.0	8.9
70°-80°	177.6	4.0
80°-90°	38.1	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°	1602.9	35.8
0°-40°	2463.7	55.0
0°-60°	3864.2	86.2
0°-90°	4481.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4481.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2283	2283	2283	2283	2283	
5°	2243	2240	2240	2238	2238	213
15°	2098	2098	2077	2056	2048	590
25°	1818	1808	1779	1715	1668	835
35°	1475	1464	1393	1288	1256	922
45°	1132	1108	1013	929	892	872
55°	786	763	691	610	578	705
65°	467	441	398	406	338	460
75°	187	174	164	156	172	201
85°	26	29	32	34	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2282.6	2282.6	2282.6	2282.6	2282.6
2.5°	2266.7	2266.7	2266.7	2264.1	2264.1
5°	2243.0	2240.3	2240.3	2237.7	2237.7
7.5°	2224.5	2221.9	2219.2	2216.6	2211.3
10°	2198.1	2198.1	2195.5	2182.3	2179.6
12.5°	2155.9	2153.3	2142.7	2124.2	2119.0
15°	2097.8	2097.8	2076.7	2055.6	2047.7
17.5°	2034.5	2031.9	2005.5	1984.4	1973.8
20°	1965.9	1960.6	1934.2	1899.9	1881.5
22.5°	1889.4	1889.4	1857.7	1812.9	1794.4
25°	1818.1	1807.6	1778.6	1715.2	1667.7
27.5°	1736.3	1720.5	1688.8	1599.1	1543.7
30°	1646.6	1638.7	1593.8	1477.7	1435.5
32.5°	1562.2	1549.0	1501.5	1380.1	1345.8
35°	1475.1	1464.5	1393.3	1287.7	1256.1
37.5°	1388.0	1374.8	1285.1	1200.7	1161.1
40°	1300.9	1285.1	1187.5	1110.9	1068.7
42.5°	1219.1	1198.0	1103.0	1021.2	973.7
45°	1132.0	1108.3	1013.3	928.9	891.9
47.5°	1045.0	1023.9	936.8	849.7	807.5
50°	952.6	934.1	855.0	767.9	723.0
52.5°	876.1	847.1	770.5	683.4	646.5
55°	786.4	762.6	691.4	609.6	577.9
57.5°	704.6	680.8	614.8	538.3	511.9
60°	628.0	593.7	538.3	472.3	451.2
62.5°	543.6	517.2	469.7	414.3	440.7
65°	467.1	440.7	398.5	406.4	337.8
67.5°	382.6	369.4	332.5	295.5	285.0
70°	311.4	295.5	282.4	242.8	232.2
72.5°	248.0	232.2	213.7	192.6	184.7
75°	187.4	174.2	163.6	155.7	171.5
77.5°	129.3	124.0	116.1	108.2	105.6
80°	84.4	81.8	79.2	76.5	73.9
82.5°	50.1	50.1	50.1	50.1	50.1
85°	26.4	29.0	31.7	34.3	36.9
87.5°	15.8	15.8	18.5	21.1	23.7
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)