

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: P546789

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-81-96-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: P546789
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-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

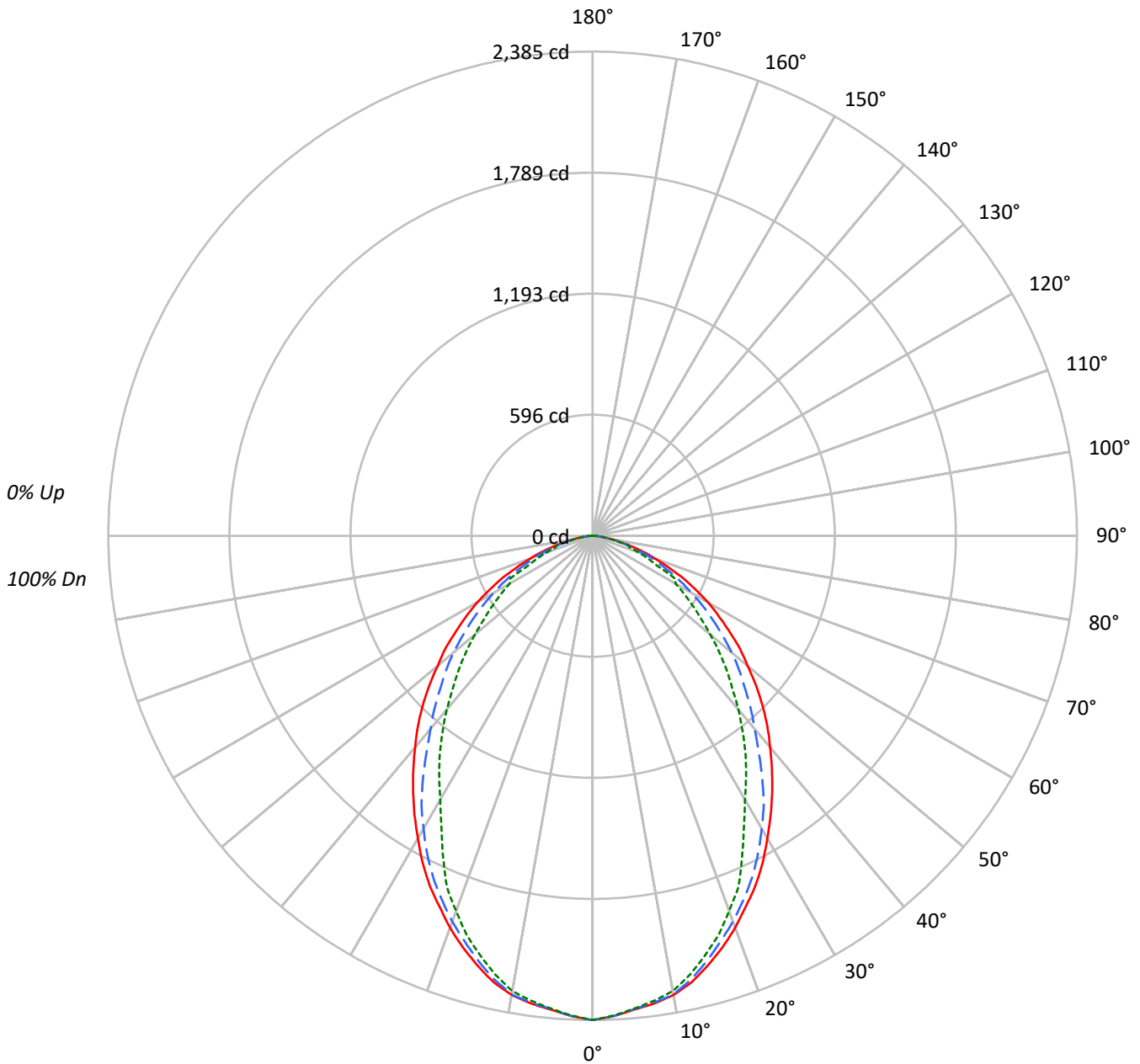
Lumens per Lamp: N/A
Luminaire Lumens: 4682.0 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3209	3209	3209
5°	3165	3162	3158
10°	3138	3134	3111
15°	3053	3023	2980
20°	2941	2894	2815
25°	2820	2759	2587
30°	2673	2587	2330
35°	2532	2391	2156
40°	2387	2179	1961
45°	2251	2015	1773
50°	2083	1870	1581
55°	1927	1695	1416
60°	1766	1514	1269
65°	1554	1325	1124
70°	1280	1161	954
75°	1018	888	932
80°	683	641	598
85°	426	511	596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.0	4.7
10°-20°	609.3	13.0
20°-30°	843.5	18.0
30°-40°	899.4	19.2
40°-50°	820.5	17.5
50°-60°	642.8	13.7
60°-70°	419.0	8.9
70°-80°	185.6	4.0
80°-90°	39.9	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°	1674.8	35.8
0°-40°	2574.2	55.0
0°-60°	4037.6	86.2
0°-90°	4682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4682.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2385	2385	2385	2385	2385	
5°	2344	2341	2341	2338	2338	222
15°	2192	2192	2170	2148	2140	616
25°	1900	1889	1858	1792	1742	872
35°	1541	1530	1456	1346	1312	964
45°	1183	1158	1059	970	932	911
55°	822	797	722	637	604	737
65°	488	460	416	425	353	481
75°	196	182	171	163	179	210
85°	28	30	33	36	39	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2384.9	2384.9	2384.9	2384.9	2384.9
2.5°	2368.4	2368.4	2368.4	2365.6	2365.6
5°	2343.6	2340.8	2340.8	2338.1	2338.1
7.5°	2324.3	2321.5	2318.8	2316.0	2310.5
10°	2296.7	2296.7	2294.0	2280.2	2277.4
12.5°	2252.6	2249.8	2238.8	2219.5	2214.0
15°	2191.9	2191.9	2169.9	2147.8	2139.6
17.5°	2125.8	2123.0	2095.4	2073.4	2062.4
20°	2054.1	2048.6	2021.0	1985.2	1965.9
22.5°	1974.1	1974.1	1941.0	1894.2	1874.9
25°	1899.7	1888.7	1858.3	1792.2	1742.5
27.5°	1814.2	1797.7	1764.6	1670.8	1612.9
30°	1720.5	1712.2	1665.3	1544.0	1499.9
32.5°	1632.2	1618.5	1568.8	1442.0	1406.2
35°	1541.3	1530.2	1455.8	1345.5	1312.4
37.5°	1450.3	1436.5	1342.7	1254.5	1213.2
40°	1359.3	1342.7	1240.7	1160.8	1116.7
42.5°	1273.8	1251.8	1152.5	1067.0	1017.4
45°	1182.8	1158.0	1058.8	970.5	931.9
47.5°	1091.8	1069.8	978.8	887.8	843.7
50°	995.3	976.0	893.3	802.3	755.5
52.5°	915.4	885.1	805.1	714.1	675.5
55°	821.6	796.8	722.4	636.9	603.8
57.5°	736.2	711.3	642.4	562.5	534.9
60°	656.2	620.4	562.5	493.5	471.5
62.5°	568.0	540.4	490.8	432.9	460.4
65°	488.0	460.4	416.3	424.6	352.9
67.5°	399.8	386.0	347.4	308.8	297.8
70°	325.3	308.8	295.0	253.7	242.6
72.5°	259.2	242.6	223.3	201.3	193.0
75°	195.8	182.0	170.9	162.7	179.2
77.5°	135.1	129.6	121.3	113.0	110.3
80°	88.2	85.5	82.7	80.0	77.2
82.5°	52.4	52.4	52.4	52.4	52.4
85°	27.6	30.3	33.1	35.8	38.6
87.5°	16.5	16.5	19.3	22.1	24.8
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)