

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: P546791

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-82-84-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: P546791
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-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

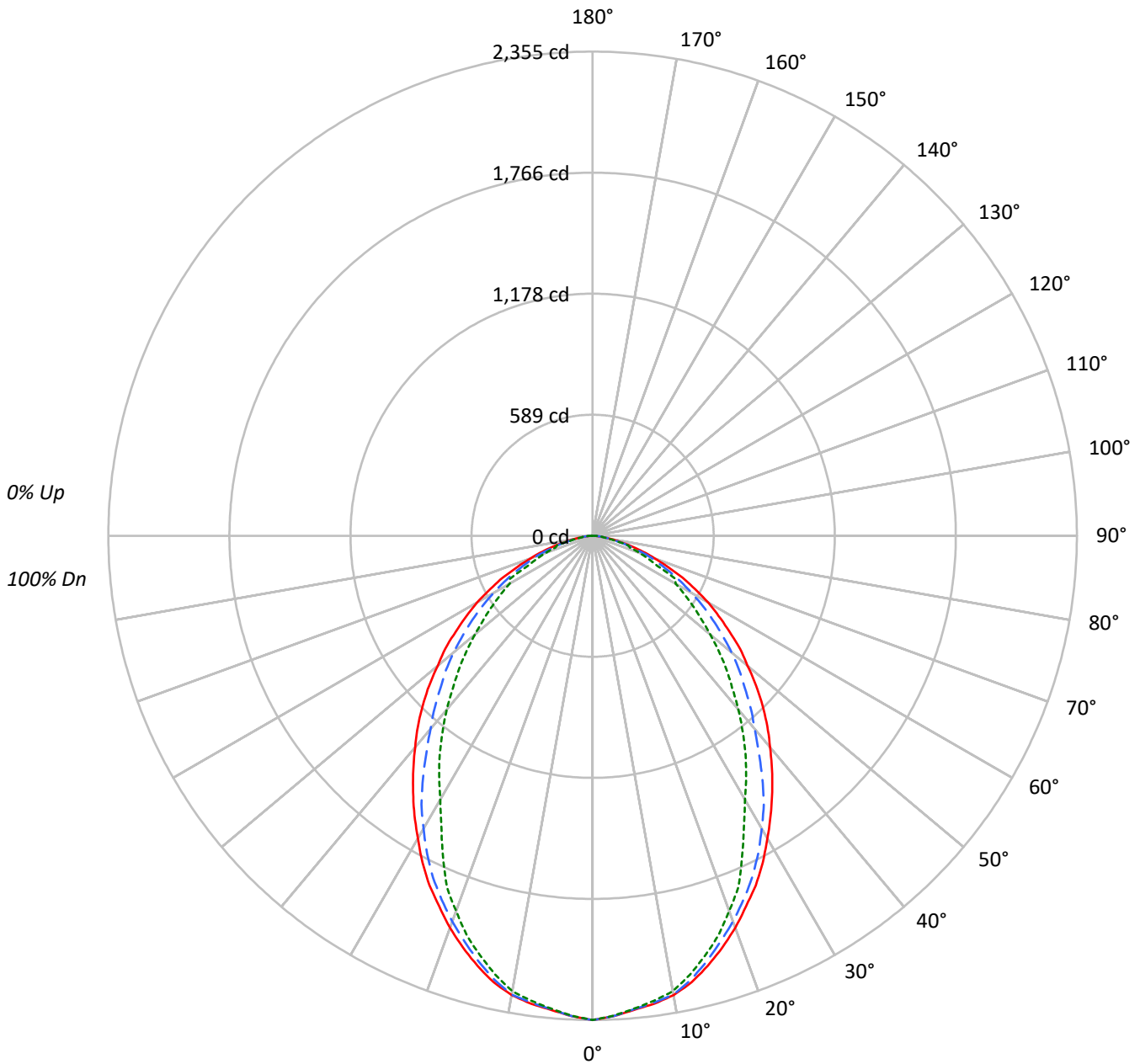
Lumens per Lamp: N/A
Luminaire Lumens: 4624.0 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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					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°	3169	3169	3169
5°	3126	3122	3119
10°	3099	3095	3073
15°	3015	2985	2943
20°	2905	2858	2780
25°	2785	2725	2555
30°	2640	2555	2301
35°	2500	2361	2129
40°	2358	2152	1937
45°	2223	1990	1751
50°	2058	1847	1562
55°	1904	1673	1399
60°	1744	1495	1253
65°	1535	1309	1110
70°	1264	1146	943
75°	1005	878	920
80°	675	633	590
85°	420	505	588



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.3	4.7
10°-20°	601.7	13.0
20°-30°	833.1	18.0
30°-40°	888.3	19.2
40°-50°	810.4	17.5
50°-60°	634.9	13.7
60°-70°	413.8	8.9
70°-80°	183.3	4.0
80°-90°	39.4	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°	1654.0	35.8
0°-40°	2542.3	55.0
0°-60°	3987.5	86.2
0°-90°	4624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4624.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2355	2355	2355	2355	2355	
5°	2315	2312	2312	2309	2309	220
15°	2165	2165	2143	2121	2113	609
25°	1876	1865	1835	1770	1721	861
35°	1522	1511	1438	1329	1296	952
45°	1168	1144	1046	958	920	900
55°	812	787	713	629	596	728
65°	482	455	411	419	348	475
75°	193	180	169	161	177	207
85°	27	30	33	35	38	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2355.4	2355.4	2355.4	2355.4	2355.4
2.5°	2339.1	2339.1	2339.1	2336.3	2336.3
5°	2314.6	2311.8	2311.8	2309.1	2309.1
7.5°	2295.5	2292.8	2290.1	2287.3	2281.9
10°	2268.3	2268.3	2265.5	2251.9	2249.2
12.5°	2224.7	2222.0	2211.1	2192.0	2186.6
15°	2164.8	2164.8	2143.0	2121.2	2113.1
17.5°	2099.4	2096.7	2069.5	2047.7	2036.8
20°	2028.6	2023.2	1996.0	1960.6	1941.5
22.5°	1949.7	1949.7	1917.0	1870.7	1851.6
25°	1876.2	1865.3	1835.3	1770.0	1720.9
27.5°	1791.7	1775.4	1742.7	1650.1	1593.0
30°	1699.2	1691.0	1644.7	1524.9	1481.3
32.5°	1612.0	1598.4	1549.4	1424.1	1388.7
35°	1522.2	1511.3	1437.7	1328.8	1296.2
37.5°	1432.3	1418.7	1326.1	1239.0	1198.1
40°	1342.4	1326.1	1225.4	1146.4	1102.8
42.5°	1258.0	1236.2	1138.2	1053.8	1004.8
45°	1168.2	1143.7	1045.6	958.5	920.4
47.5°	1078.3	1056.5	966.7	876.8	833.2
50°	983.0	963.9	882.3	792.4	746.1
52.5°	904.0	874.1	795.1	705.3	667.1
55°	811.5	786.9	713.4	629.0	596.3
57.5°	727.0	702.5	634.5	555.5	528.3
60°	648.1	612.7	555.5	487.4	465.6
62.5°	560.9	533.7	484.7	427.5	454.7
65°	482.0	454.7	411.2	419.3	348.5
67.5°	394.8	381.2	343.1	305.0	294.1
70°	321.3	305.0	291.4	250.5	239.6
72.5°	256.0	239.6	220.6	198.8	190.6
75°	193.3	179.7	168.8	160.7	177.0
77.5°	133.4	128.0	119.8	111.6	108.9
80°	87.1	84.4	81.7	79.0	76.2
82.5°	51.7	51.7	51.7	51.7	51.7
85°	27.2	30.0	32.7	35.4	38.1
87.5°	16.3	16.3	19.1	21.8	24.5
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)