

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: P546792

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-82-85-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: P546792
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-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

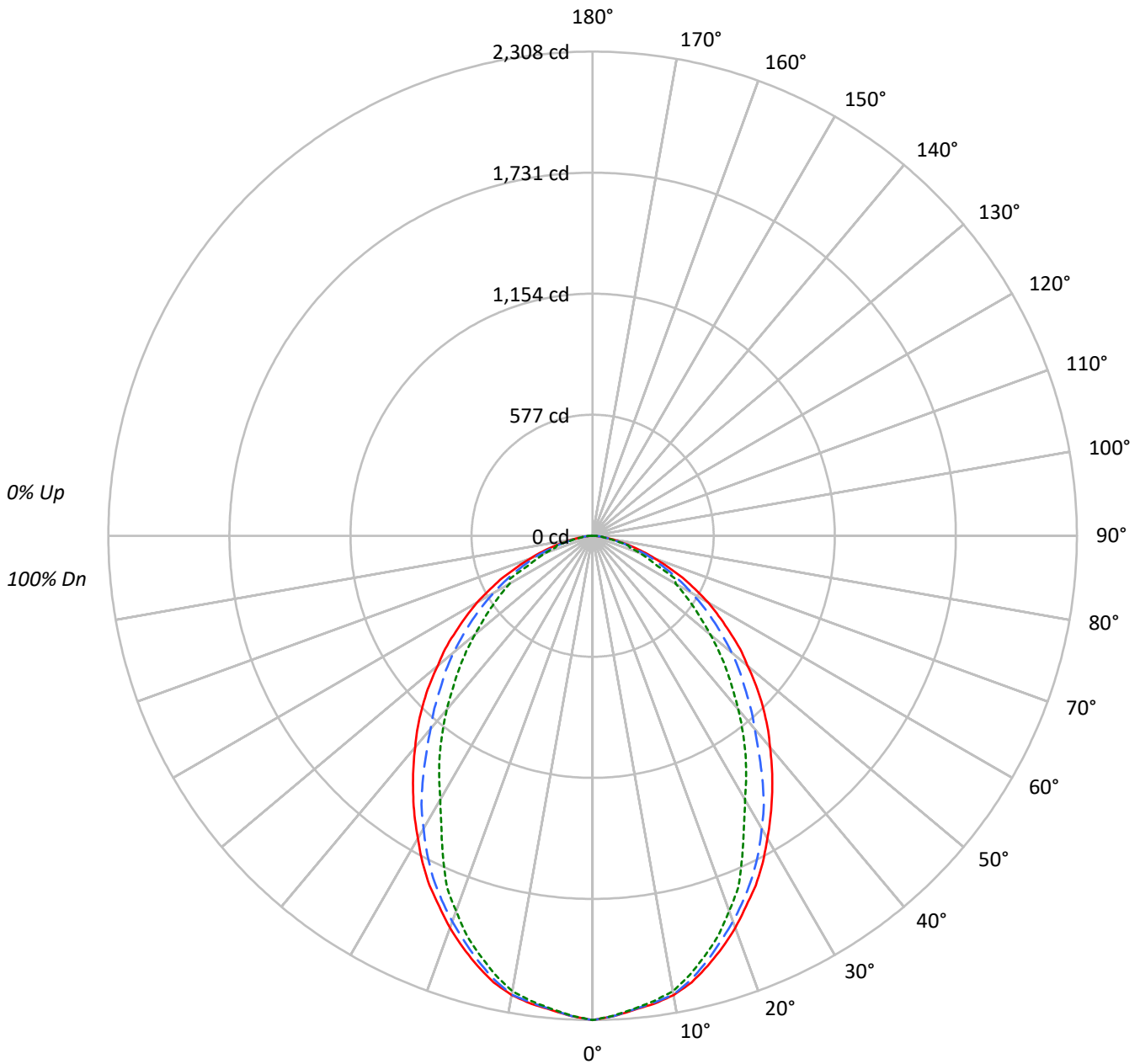
Lumens per Lamp: N/A
Luminaire Lumens: 4532.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	3106	3106	3106
5°	3064	3060	3057
10°	3037	3034	3012
15°	2955	2926	2885
20°	2847	2801	2725
25°	2730	2670	2504
30°	2587	2504	2256
35°	2451	2315	2087
40°	2311	2109	1899
45°	2179	1950	1717
50°	2017	1810	1531
55°	1866	1640	1371
60°	1709	1465	1228
65°	1504	1283	1088
70°	1239	1124	924
75°	985	860	902
80°	662	621	579
85°	412	494	577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.9	4.7
10°-20°	589.8	13.0
20°-30°	816.5	18.0
30°-40°	870.6	19.2
40°-50°	794.2	17.5
50°-60°	622.2	13.7
60°-70°	405.5	8.9
70°-80°	179.7	4.0
80°-90°	38.6	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°	1621.1	35.8
0°-40°	2491.7	55.0
0°-60°	3908.2	86.2
0°-90°	4532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2308	2308	2308	2308	2308	
5°	2268	2266	2266	2263	2263	215
15°	2122	2122	2100	2079	2071	596
25°	1839	1828	1799	1735	1687	844
35°	1492	1481	1409	1302	1270	933
45°	1145	1121	1025	939	902	882
55°	795	771	699	616	584	713
65°	472	446	403	411	342	466
75°	190	176	166	158	174	203
85°	27	29	32	35	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2308.5	2308.5	2308.5	2308.5	2308.5
2.5°	2292.5	2292.5	2292.5	2289.9	2289.9
5°	2268.5	2265.8	2265.8	2263.2	2263.2
7.5°	2249.8	2247.2	2244.5	2241.8	2236.5
10°	2223.1	2223.1	2220.5	2207.1	2204.5
12.5°	2180.4	2177.8	2167.1	2148.4	2143.1
15°	2121.7	2121.7	2100.4	2079.0	2071.0
17.5°	2057.7	2055.0	2028.3	2007.0	1996.3
20°	1988.3	1982.9	1956.3	1921.6	1902.9
22.5°	1910.9	1910.9	1878.9	1833.5	1814.8
25°	1838.8	1828.2	1798.8	1734.7	1686.7
27.5°	1756.1	1740.1	1708.1	1617.3	1561.3
30°	1665.4	1657.3	1612.0	1494.5	1451.8
32.5°	1579.9	1566.6	1518.6	1395.8	1361.1
35°	1491.9	1481.2	1409.1	1302.4	1270.4
37.5°	1403.8	1390.5	1299.7	1214.3	1174.3
40°	1315.7	1299.7	1201.0	1123.6	1080.9
42.5°	1233.0	1211.7	1115.6	1032.8	984.8
45°	1144.9	1120.9	1024.8	939.4	902.1
47.5°	1056.9	1035.5	947.4	859.4	816.7
50°	963.4	944.8	864.7	776.6	731.3
52.5°	886.1	856.7	779.3	691.2	653.9
55°	795.3	771.3	699.2	616.5	584.5
57.5°	712.6	688.6	621.8	544.4	517.8
60°	635.2	600.5	544.4	477.7	456.4
62.5°	549.8	523.1	475.1	419.0	445.7
65°	472.4	445.7	403.0	411.0	341.6
67.5°	387.0	373.6	336.3	298.9	288.2
70°	314.9	298.9	285.6	245.5	234.9
72.5°	250.9	234.9	216.2	194.8	186.8
75°	189.5	176.1	165.5	157.5	173.5
77.5°	130.8	125.4	117.4	109.4	106.8
80°	85.4	82.7	80.1	77.4	74.7
82.5°	50.7	50.7	50.7	50.7	50.7
85°	26.7	29.4	32.0	34.7	37.4
87.5°	16.0	16.0	18.7	21.4	24.0
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)