

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: P546436

Luminaire Tested: **FMR-24-4-LD4-1HI-35-UNV-81-94-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: P546436
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-LD4-1HI-35-UNV-81-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

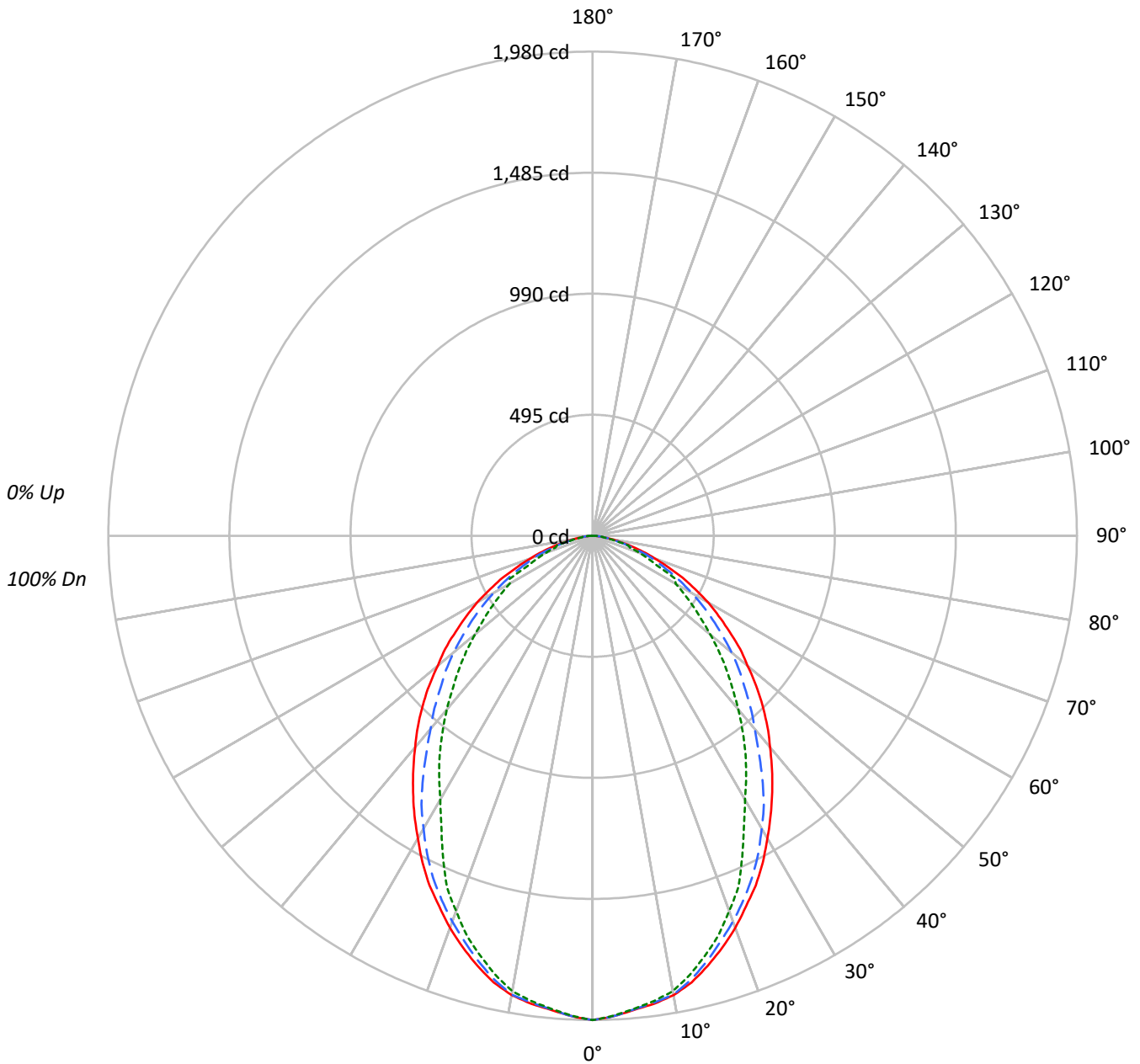
Lumens per Lamp: N/A
Luminaire Lumens: 3888.0 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	2665	2665	2665
5°	2629	2625	2622
10°	2606	2603	2584
15°	2535	2510	2475
20°	2442	2403	2337
25°	2342	2291	2148
30°	2220	2149	1935
35°	2102	1986	1790
40°	1983	1810	1629
45°	1869	1673	1473
50°	1730	1553	1313
55°	1601	1407	1176
60°	1466	1257	1054
65°	1290	1101	933
70°	1063	964	793
75°	845	738	774
80°	568	532	497
85°	354	425	496



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.4	4.7
10°-20°	506.0	13.0
20°-30°	700.5	18.0
30°-40°	746.9	19.2
40°-50°	681.4	17.5
50°-60°	533.8	13.7
60°-70°	347.9	8.9
70°-80°	154.1	4.0
80°-90°	33.1	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°	1390.8	35.8
0°-40°	2137.7	55.0
0°-60°	3352.8	86.2
0°-90°	3888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1980	1980	1980	1980	1980	
5°	1946	1944	1944	1942	1942	185
15°	1820	1820	1802	1784	1777	512
25°	1578	1568	1543	1488	1447	724
35°	1280	1271	1209	1117	1090	800
45°	982	962	879	806	774	757
55°	682	662	600	529	501	612
65°	405	382	346	353	293	399
75°	163	151	142	135	149	174
85°	23	25	28	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1980.5	1980.5	1980.5	1980.5	1980.5
2.5°	1966.8	1966.8	1966.8	1964.5	1964.5
5°	1946.2	1943.9	1943.9	1941.6	1941.6
7.5°	1930.1	1927.8	1925.5	1923.3	1918.7
10°	1907.2	1907.2	1904.9	1893.5	1891.2
12.5°	1870.6	1868.3	1859.1	1843.1	1838.5
15°	1820.2	1820.2	1801.9	1783.6	1776.7
17.5°	1765.3	1763.0	1740.1	1721.8	1712.6
20°	1705.7	1701.2	1678.3	1648.5	1632.5
22.5°	1639.3	1639.3	1611.9	1572.9	1556.9
25°	1577.5	1568.4	1543.2	1488.2	1447.0
27.5°	1506.6	1492.8	1465.3	1387.5	1339.4
30°	1428.7	1421.8	1382.9	1282.2	1245.5
32.5°	1355.4	1344.0	1302.8	1197.5	1167.7
35°	1279.9	1270.7	1208.9	1117.3	1089.8
37.5°	1204.3	1192.9	1115.0	1041.8	1007.4
40°	1128.8	1115.0	1030.3	963.9	927.3
42.5°	1057.8	1039.5	957.0	886.1	844.9
45°	982.2	961.6	879.2	805.9	773.9
47.5°	906.7	888.4	812.8	737.2	700.6
50°	826.5	810.5	741.8	666.3	627.3
52.5°	760.1	735.0	668.6	593.0	560.9
55°	682.3	661.7	599.9	528.9	501.4
57.5°	611.3	590.7	533.5	467.1	444.2
60°	544.9	515.2	467.1	409.8	391.5
62.5°	471.7	448.8	407.5	359.5	382.4
65°	405.3	382.4	345.7	352.6	293.1
67.5°	332.0	320.5	288.5	256.4	247.3
70°	270.2	256.4	245.0	210.6	201.5
72.5°	215.2	201.5	185.5	167.1	160.3
75°	162.6	151.1	142.0	135.1	148.8
77.5°	112.2	107.6	100.7	93.9	91.6
80°	73.3	71.0	68.7	66.4	64.1
82.5°	43.5	43.5	43.5	43.5	43.5
85°	22.9	25.2	27.5	29.8	32.1
87.5°	13.7	13.7	16.0	18.3	20.6
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)