

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: P546618

Luminaire Tested: **FMR-24-4-LD4-1STD-40-UNV-80-87-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: P546618
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-LD4-1STD-40-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

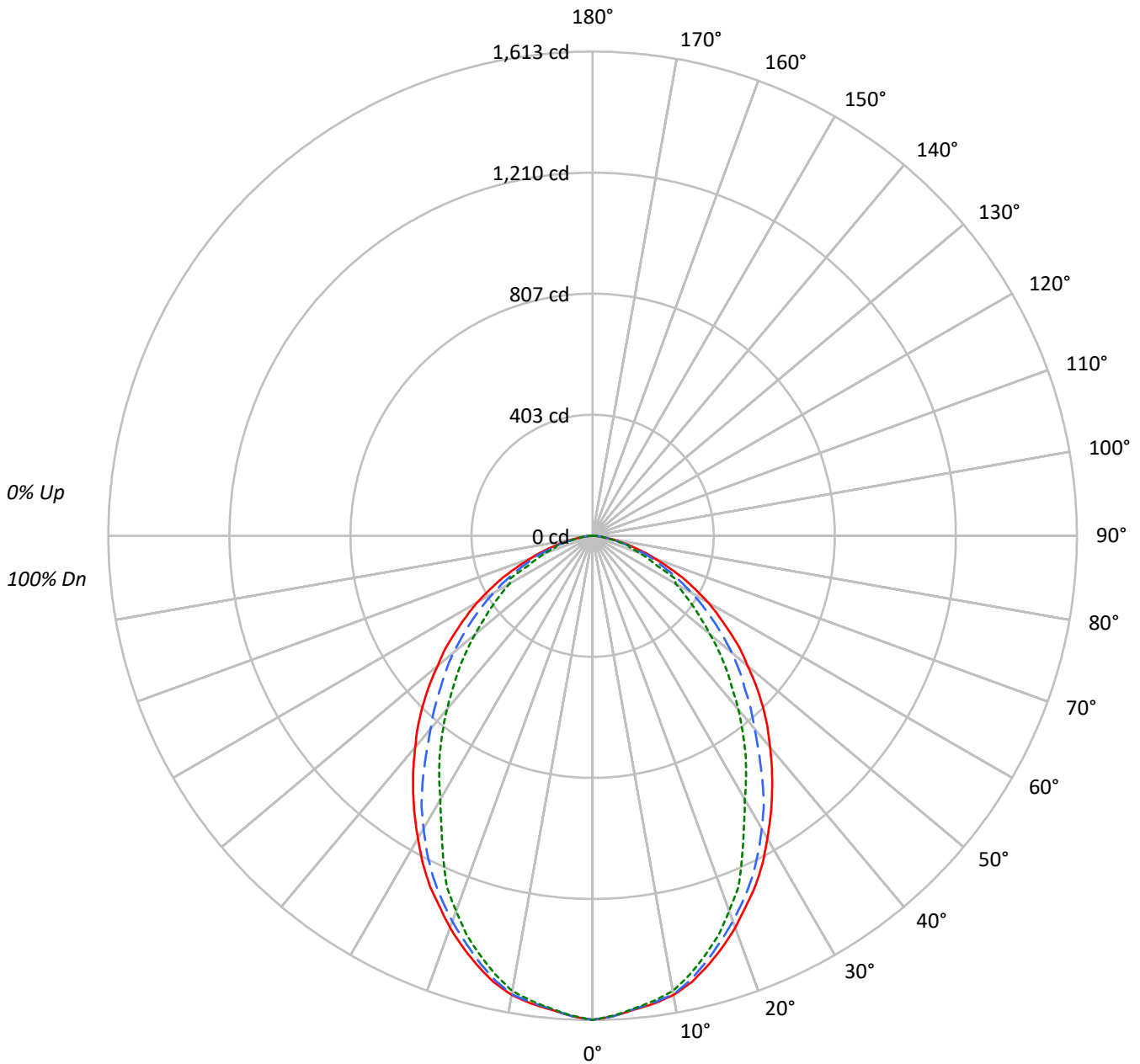
Lumens per Lamp: N/A
Luminaire Lumens: 3166.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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								
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°	2170	2170	2170
5°	2140	2138	2135
10°	2122	2119	2104
15°	2065	2044	2015
20°	1989	1957	1903
25°	1907	1866	1749
30°	1808	1750	1576
35°	1712	1617	1458
40°	1614	1474	1326
45°	1522	1362	1199
50°	1409	1265	1069
55°	1303	1146	958
60°	1194	1023	858
65°	1051	896	760
70°	865	785	646
75°	688	601	630
80°	463	433	404
85°	287	346	403



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	4.7
10°-20°	412.0	13.0
20°-30°	570.4	18.0
30°-40°	608.2	19.2
40°-50°	554.9	17.5
50°-60°	434.7	13.7
60°-70°	283.3	8.9
70°-80°	125.5	4.0
80°-90°	26.9	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°	1132.5	35.8
0°-40°	1740.7	55.0
0°-60°	2730.2	86.2
0°-90°	3166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1613	1613	1613	1613	1613	
5°	1585	1583	1583	1581	1581	150
15°	1482	1482	1467	1452	1447	417
25°	1285	1277	1257	1212	1178	590
35°	1042	1035	984	910	888	652
45°	800	783	716	656	630	616
55°	556	539	488	431	408	498
65°	330	311	282	287	239	325
75°	132	123	116	110	121	142
85°	19	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1612.7	1612.7	1612.7	1612.7	1612.7
2.5°	1601.5	1601.5	1601.5	1599.7	1599.7
5°	1584.8	1582.9	1582.9	1581.0	1581.0
7.5°	1571.7	1569.8	1568.0	1566.1	1562.4
10°	1553.1	1553.1	1551.2	1541.9	1540.0
12.5°	1523.2	1521.4	1513.9	1500.9	1497.1
15°	1482.2	1482.2	1467.3	1452.4	1446.8
17.5°	1437.5	1435.6	1417.0	1402.0	1394.6
20°	1389.0	1385.3	1366.6	1342.4	1329.3
22.5°	1334.9	1334.9	1312.5	1280.9	1267.8
25°	1284.6	1277.1	1256.6	1211.9	1178.3
27.5°	1226.8	1215.6	1193.2	1129.8	1090.7
30°	1163.4	1157.8	1126.1	1044.1	1014.2
32.5°	1103.7	1094.4	1060.9	975.1	950.9
35°	1042.2	1034.7	984.4	909.8	887.5
37.5°	980.7	971.4	908.0	848.3	820.3
40°	919.2	908.0	839.0	784.9	755.1
42.5°	861.4	846.4	779.3	721.5	688.0
45°	799.8	783.1	715.9	656.3	630.2
47.5°	738.3	723.4	661.9	600.3	570.5
50°	673.1	660.0	604.1	542.5	510.8
52.5°	619.0	598.5	544.4	482.9	456.8
55°	555.6	538.8	488.5	430.7	408.3
57.5°	497.8	481.0	434.4	380.3	361.7
60°	443.7	419.5	380.3	333.7	318.8
62.5°	384.1	365.4	331.9	292.7	311.4
65°	330.0	311.4	281.5	287.1	238.6
67.5°	270.3	261.0	234.9	208.8	201.4
70°	220.0	208.8	199.5	171.5	164.1
72.5°	175.3	164.1	151.0	136.1	130.5
75°	132.4	123.1	115.6	110.0	121.2
77.5°	91.4	87.6	82.0	76.4	74.6
80°	59.7	57.8	55.9	54.1	52.2
82.5°	35.4	35.4	35.4	35.4	35.4
85°	18.6	20.5	22.4	24.2	26.1
87.5°	11.2	11.2	13.1	14.9	16.8
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)