

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: P546589

Luminaire Tested: **FMR-24-4-LD4-1STD-35-UNV-80-96-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: P546589
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-35-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

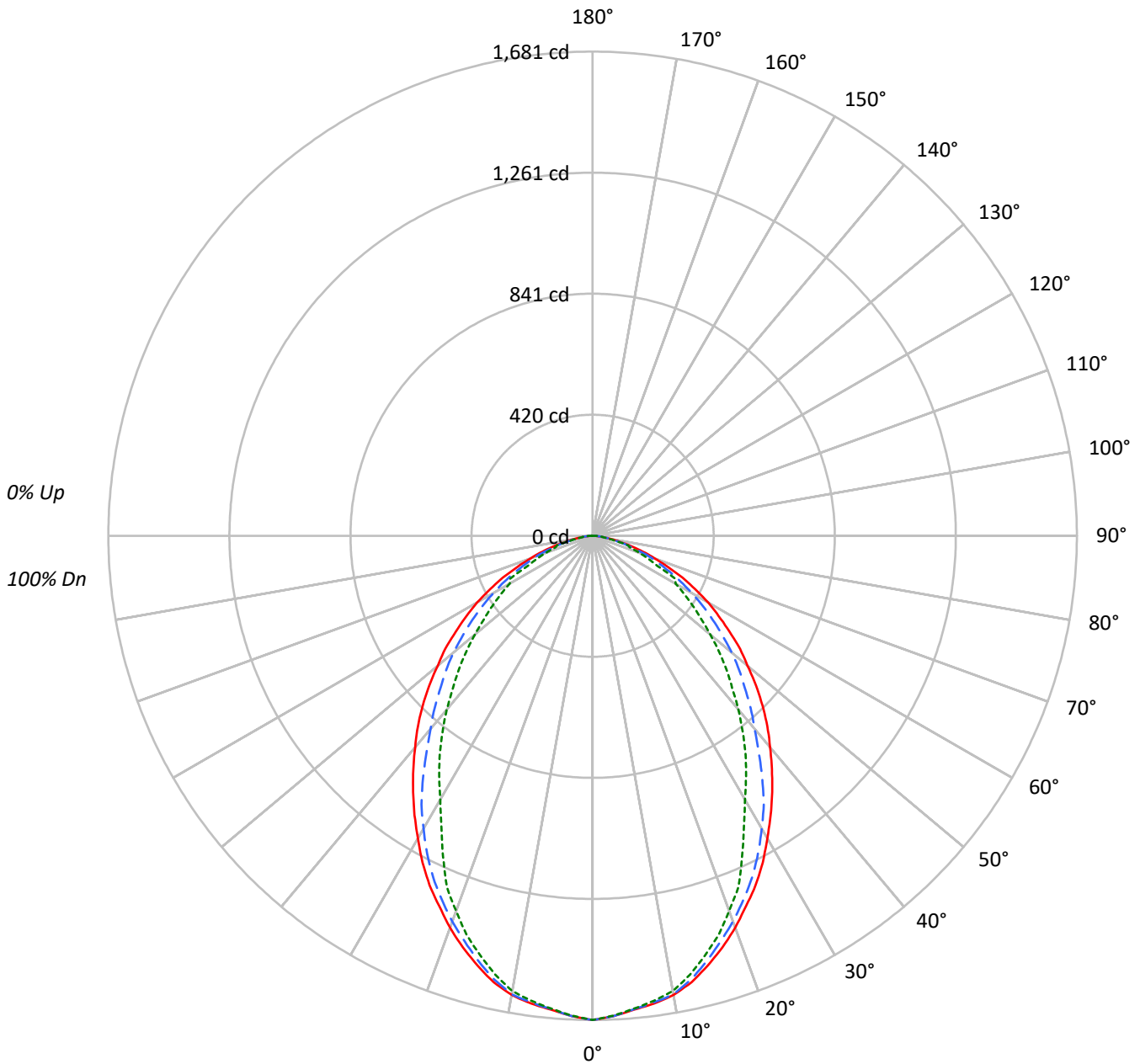
Lumens per Lamp: N/A
Luminaire Lumens: 3300.0 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	2262	2262	2262
5°	2231	2228	2226
10°	2212	2209	2193
15°	2152	2130	2101
20°	2073	2040	1984
25°	1988	1945	1823
30°	1884	1824	1643
35°	1784	1685	1519
40°	1683	1536	1382
45°	1586	1420	1250
50°	1468	1318	1115
55°	1358	1194	998
60°	1245	1067	894
65°	1095	934	792
70°	902	818	673
75°	717	626	657
80°	482	452	422
85°	299	360	420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.5	4.7
10°-20°	429.4	13.0
20°-30°	594.5	18.0
30°-40°	633.9	19.2
40°-50°	578.3	17.5
50°-60°	453.1	13.7
60°-70°	295.3	8.9
70°-80°	130.8	4.0
80°-90°	28.1	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°	1180.4	35.8
0°-40°	1814.4	55.0
0°-60°	2845.8	86.2
0°-90°	3300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3300.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1681	1681	1681	1681	1681	
5°	1652	1650	1650	1648	1648	157
15°	1545	1545	1529	1514	1508	434
25°	1339	1331	1310	1263	1228	615
35°	1086	1078	1026	948	925	679
45°	834	816	746	684	657	642
55°	579	562	509	449	426	519
65°	344	324	293	299	249	339
75°	138	128	120	115	126	148
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1681.0	1681.0	1681.0	1681.0	1681.0
2.5°	1669.3	1669.3	1669.3	1667.4	1667.4
5°	1651.8	1649.9	1649.9	1647.9	1647.9
7.5°	1638.2	1636.3	1634.3	1632.4	1628.5
10°	1618.8	1618.8	1616.8	1607.1	1605.2
12.5°	1587.7	1585.8	1578.0	1564.4	1560.5
15°	1544.9	1544.9	1529.4	1513.8	1508.0
17.5°	1498.3	1496.4	1476.9	1461.4	1453.6
20°	1447.8	1443.9	1424.5	1399.2	1385.6
22.5°	1391.4	1391.4	1368.1	1335.1	1321.5
25°	1339.0	1331.2	1309.8	1263.2	1228.2
27.5°	1278.7	1267.0	1243.7	1177.7	1136.8
30°	1212.6	1206.8	1173.8	1088.3	1057.2
32.5°	1150.4	1140.7	1105.8	1016.4	991.1
35°	1086.3	1078.5	1026.1	948.3	925.0
37.5°	1022.2	1012.5	946.4	884.2	855.1
40°	958.1	946.4	874.5	818.1	787.0
42.5°	897.8	882.3	812.3	752.1	717.1
45°	833.7	816.2	746.2	684.1	656.8
47.5°	769.6	754.0	689.9	625.8	594.7
50°	701.5	687.9	629.6	565.5	532.5
52.5°	645.2	623.8	567.5	503.3	476.1
55°	579.1	561.6	509.2	448.9	425.6
57.5°	518.9	501.4	452.8	396.4	377.0
60°	462.5	437.2	396.4	347.9	332.3
62.5°	400.3	380.9	345.9	305.1	324.5
65°	344.0	324.5	293.4	299.3	248.7
67.5°	281.8	272.1	244.9	217.7	209.9
70°	229.3	217.7	207.9	178.8	171.0
72.5°	182.7	171.0	157.4	141.9	136.0
75°	138.0	128.3	120.5	114.7	126.3
77.5°	95.2	91.3	85.5	79.7	77.7
80°	62.2	60.2	58.3	56.4	54.4
82.5°	36.9	36.9	36.9	36.9	36.9
85°	19.4	21.4	23.3	25.3	27.2
87.5°	11.7	11.7	13.6	15.5	17.5
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)