

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: P546587

Luminaire Tested: **FMR-24-4-LD4-1STD-35-UNV-80-88-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: P546587
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-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

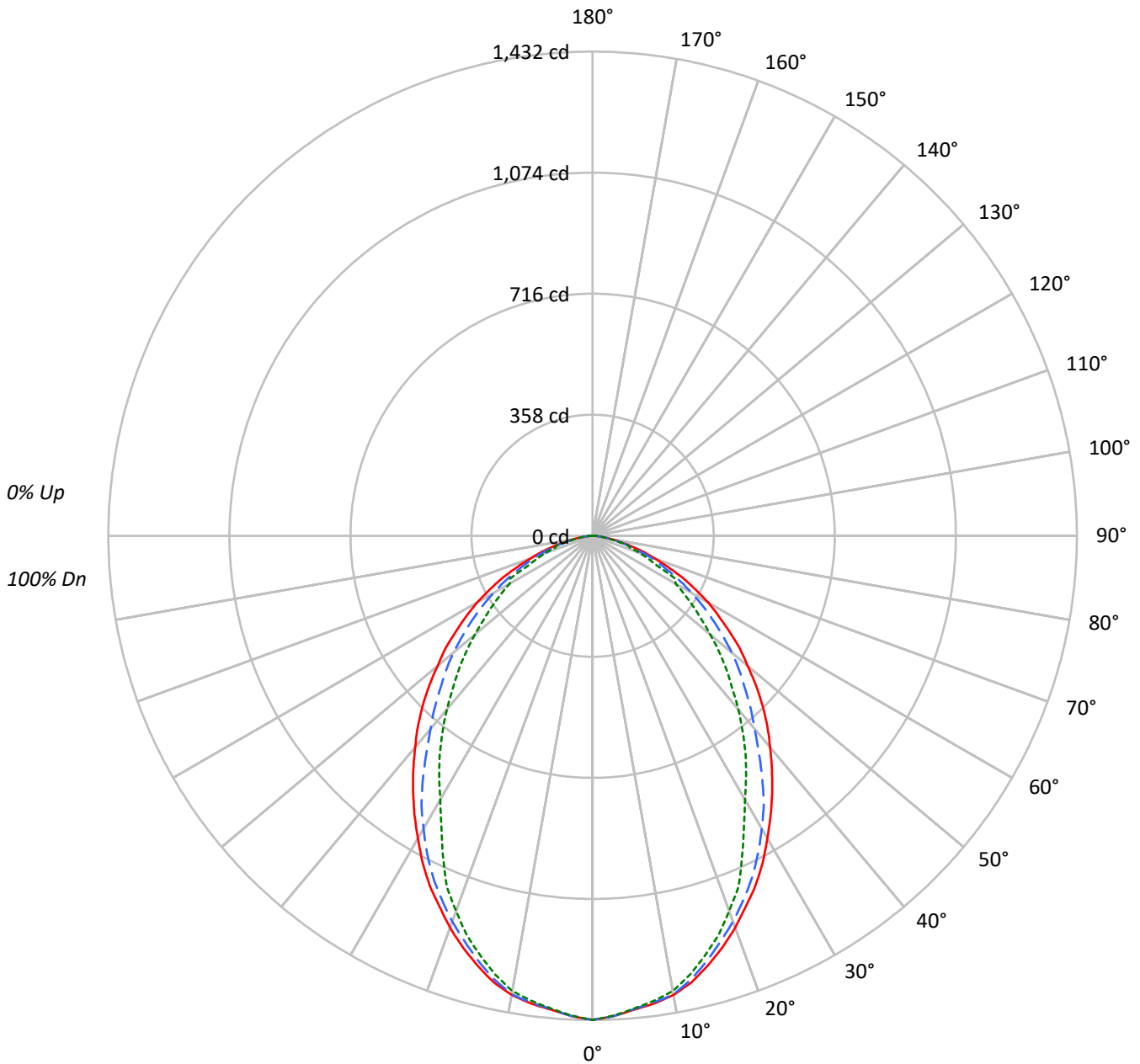
Lumens per Lamp: N/A
Luminaire Lumens: 2811.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	1927	1927	1927
5°	1900	1898	1896
10°	1884	1882	1868
15°	1833	1815	1789
20°	1766	1737	1690
25°	1693	1656	1553
30°	1605	1553	1399
35°	1520	1436	1294
40°	1433	1308	1177
45°	1351	1210	1065
50°	1251	1123	949
55°	1157	1017	850
60°	1060	909	762
65°	933	796	675
70°	768	697	573
75°	611	533	559
80°	411	385	360
85°	256	307	358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.3	4.7
10°-20°	365.8	13.0
20°-30°	506.4	18.0
30°-40°	540.0	19.2
40°-50°	492.6	17.5
50°-60°	385.9	13.7
60°-70°	251.5	8.9
70°-80°	111.4	4.0
80°-90°	23.9	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°	1005.5	35.8
0°-40°	1545.5	55.0
0°-60°	2424.1	86.2
0°-90°	2811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1432	1432	1432	1432	1432	
5°	1407	1405	1405	1404	1404	134
15°	1316	1316	1303	1290	1285	370
25°	1140	1134	1116	1076	1046	524
35°	925	919	874	808	788	579
45°	710	695	636	583	560	547
55°	493	478	434	382	362	442
65°	293	276	250	255	212	289
75°	118	109	103	98	108	126
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1431.9	1431.9	1431.9	1431.9	1431.9
2.5°	1422.0	1422.0	1422.0	1420.3	1420.3
5°	1407.1	1405.4	1405.4	1403.7	1403.7
7.5°	1395.5	1393.8	1392.2	1390.5	1387.2
10°	1378.9	1378.9	1377.3	1369.0	1367.3
12.5°	1352.4	1350.8	1344.2	1332.6	1329.3
15°	1316.0	1316.0	1302.8	1289.5	1284.6
17.5°	1276.3	1274.6	1258.1	1244.8	1238.2
20°	1233.2	1229.9	1213.4	1191.9	1180.3
22.5°	1185.2	1185.2	1165.4	1137.2	1125.6
25°	1140.5	1133.9	1115.7	1076.0	1046.2
27.5°	1089.2	1079.3	1059.4	1003.1	968.4
30°	1032.9	1028.0	999.8	927.0	900.5
32.5°	980.0	971.7	941.9	865.8	844.2
35°	925.3	918.7	874.0	807.8	788.0
37.5°	870.7	862.4	806.2	753.2	728.4
40°	816.1	806.2	744.9	696.9	670.4
42.5°	764.8	751.5	691.9	640.6	610.8
45°	710.1	695.3	635.7	582.7	559.5
47.5°	655.5	642.3	587.7	533.0	506.5
50°	597.6	586.0	536.3	481.7	453.6
52.5°	549.6	531.4	483.4	428.7	405.6
55°	493.3	478.4	433.7	382.4	362.5
57.5°	442.0	427.1	385.7	337.7	321.1
60°	394.0	372.5	337.7	296.3	283.1
62.5°	341.0	324.5	294.7	259.9	276.4
65°	293.0	276.4	250.0	254.9	211.9
67.5°	240.0	231.8	208.6	185.4	178.8
70°	195.3	185.4	177.1	152.3	145.7
72.5°	155.6	145.7	134.1	120.8	115.9
75°	117.5	109.3	102.6	97.7	107.6
77.5°	81.1	77.8	72.8	67.9	66.2
80°	53.0	51.3	49.7	48.0	46.4
82.5°	31.5	31.5	31.5	31.5	31.5
85°	16.6	18.2	19.9	21.5	23.2
87.5°	9.9	9.9	11.6	13.2	14.9
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)