

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: P546558

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-80-97-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: P546558
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-LD4-1LO-50-UNV-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

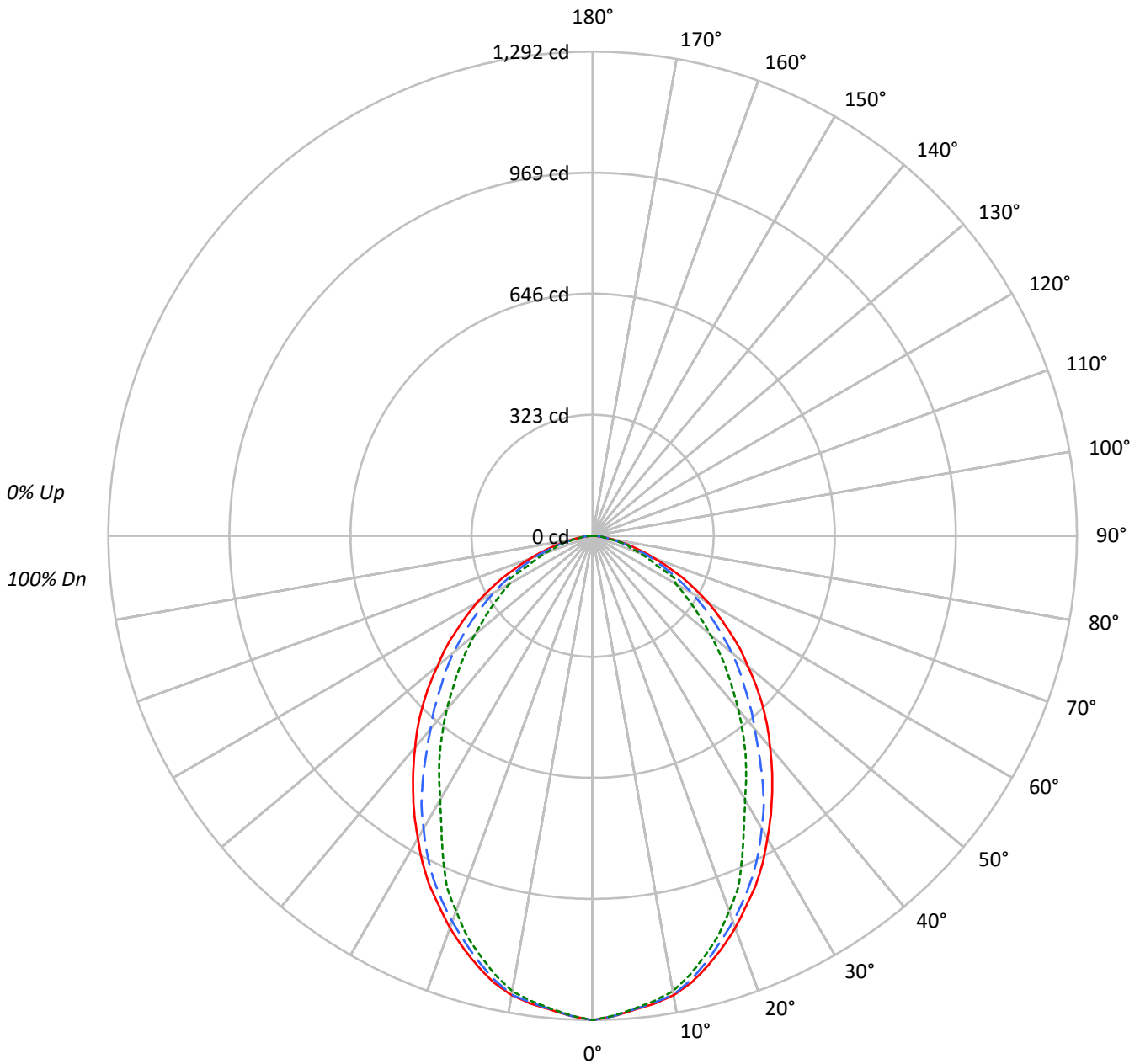
Lumens per Lamp: N/A
Luminaire Lumens: 2537.0 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	1739	1739	1739
5°	1715	1713	1711
10°	1700	1698	1686
15°	1654	1638	1615
20°	1594	1568	1525
25°	1528	1495	1402
30°	1448	1402	1263
35°	1372	1296	1168
40°	1294	1181	1063
45°	1220	1092	961
50°	1129	1013	857
55°	1044	918	768
60°	957	820	688
65°	842	718	609
70°	694	629	517
75°	552	481	505
80°	370	347	324
85°	230	276	323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.3	4.7
10°-20°	330.1	13.0
20°-30°	457.1	18.0
30°-40°	487.4	19.2
40°-50°	444.6	17.5
50°-60°	348.3	13.7
60°-70°	227.0	8.9
70°-80°	100.6	4.0
80°-90°	21.6	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°	907.5	35.8
0°-40°	1394.9	55.0
0°-60°	2187.8	86.2
0°-90°	2537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2537.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1292	1292	1292	1292	1292	
5°	1270	1268	1268	1267	1267	121
15°	1188	1188	1176	1164	1159	334
25°	1029	1023	1007	971	944	473
35°	835	829	789	729	711	522
45°	641	628	574	526	505	494
55°	445	432	391	345	327	399
65°	264	250	226	230	191	261
75°	106	99	93	88	97	114
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1292.3	1292.3	1292.3	1292.3	1292.3
2.5°	1283.3	1283.3	1283.3	1281.9	1281.9
5°	1269.9	1268.4	1268.4	1266.9	1266.9
7.5°	1259.4	1258.0	1256.5	1255.0	1252.0
10°	1244.5	1244.5	1243.0	1235.5	1234.0
12.5°	1220.6	1219.1	1213.1	1202.7	1199.7
15°	1187.7	1187.7	1175.8	1163.8	1159.3
17.5°	1151.9	1150.4	1135.4	1123.5	1117.5
20°	1113.0	1110.0	1095.1	1075.7	1065.2
22.5°	1069.7	1069.7	1051.8	1026.4	1015.9
25°	1029.4	1023.4	1007.0	971.1	944.2
27.5°	983.1	974.1	956.2	905.4	874.0
30°	932.3	927.8	902.4	836.6	812.7
32.5°	884.5	877.0	850.1	781.4	761.9
35°	835.1	829.2	788.8	729.1	711.1
37.5°	785.8	778.4	727.6	679.8	657.4
40°	736.5	727.6	672.3	629.0	605.1
42.5°	690.2	678.3	624.5	578.2	551.3
45°	640.9	627.5	573.7	525.9	505.0
47.5°	591.6	579.7	530.4	481.1	457.2
50°	539.3	528.9	484.1	434.8	409.4
52.5°	496.0	479.6	436.2	386.9	366.0
55°	445.2	431.8	391.4	345.1	327.2
57.5°	398.9	385.5	348.1	304.8	289.8
60°	355.6	336.2	304.8	267.4	255.5
62.5°	307.8	292.8	265.9	234.6	249.5
65°	264.4	249.5	225.6	230.1	191.2
67.5°	216.6	209.2	188.2	167.3	161.4
70°	176.3	167.3	159.9	137.4	131.5
72.5°	140.4	131.5	121.0	109.1	104.6
75°	106.1	98.6	92.6	88.1	97.1
77.5°	73.2	70.2	65.7	61.3	59.8
80°	47.8	46.3	44.8	43.3	41.8
82.5°	28.4	28.4	28.4	28.4	28.4
85°	14.9	16.4	17.9	19.4	20.9
87.5°	9.0	9.0	10.5	12.0	13.4
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)