

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: P546008

Luminaire Tested: **FMR-12-4-LD4-1STD-35-UNV-80-85-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: P546008
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-12-4-LD4-1STD-35-UNV-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

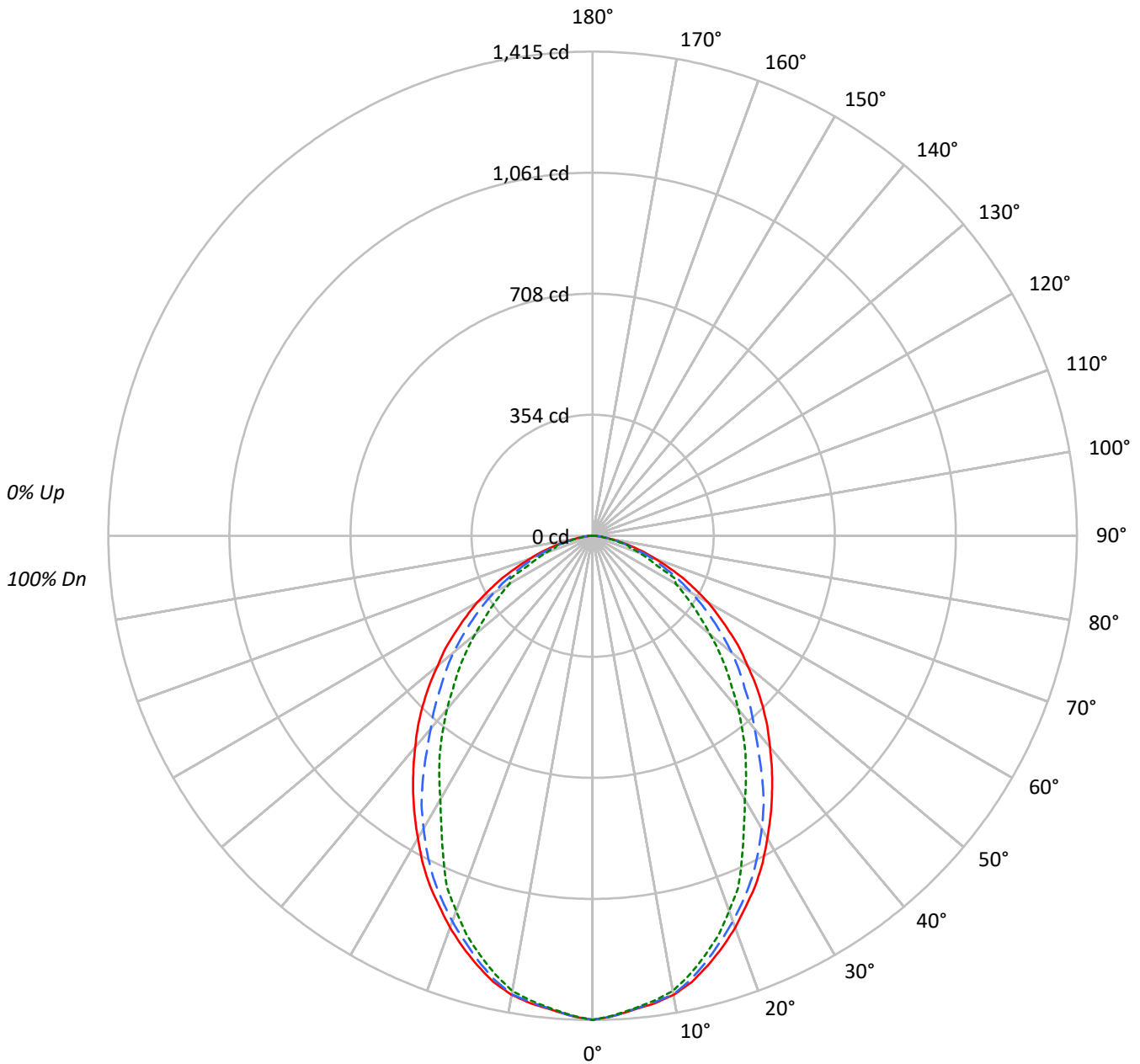
Lumens per Lamp: N/A
Luminaire Lumens: 2777.0 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3807	3807	3807
5°	3755	3750	3746
10°	3722	3718	3691
15°	3622	3585	3535
20°	3489	3433	3339
25°	3345	3273	3069
30°	3171	3069	2764
35°	3003	2837	2557
40°	2832	2585	2327
45°	2670	2390	2103
50°	2472	2218	1876
55°	2286	2010	1680
60°	2095	1795	1505
65°	1843	1572	1333
70°	1519	1377	1132
75°	1207	1054	1105
80°	810	761	710
85°	506	605	707



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.7	4.7
10°-20°	361.4	13.0
20°-30°	500.3	18.0
30°-40°	533.5	19.2
40°-50°	486.7	17.5
50°-60°	381.3	13.7
60°-70°	248.5	8.9
70°-80°	110.1	4.0
80°-90°	23.6	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°	993.4	35.8
0°-40°	1526.8	55.0
0°-60°	2394.8	86.2
0°-90°	2777.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2777.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1415	1415	1415	1415	1415	
5°	1390	1388	1388	1387	1387	132
15°	1300	1300	1287	1274	1269	365
25°	1127	1120	1102	1063	1034	517
35°	914	908	864	798	778	572
45°	702	687	628	576	553	540
55°	487	473	428	378	358	437
65°	290	273	247	252	209	285
75°	116	108	101	96	106	124
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1414.6	1414.6	1414.6	1414.6	1414.6
2.5°	1404.8	1404.8	1404.8	1403.1	1403.1
5°	1390.0	1388.4	1388.4	1386.8	1386.8
7.5°	1378.6	1377.0	1375.3	1373.7	1370.4
10°	1362.2	1362.2	1360.6	1352.4	1350.8
12.5°	1336.1	1334.4	1327.9	1316.4	1313.2
15°	1300.1	1300.1	1287.0	1273.9	1269.0
17.5°	1260.8	1259.2	1242.9	1229.8	1223.2
20°	1218.3	1215.1	1198.7	1177.4	1166.0
22.5°	1170.9	1170.9	1151.3	1123.5	1112.0
25°	1126.7	1120.2	1102.2	1063.0	1033.5
27.5°	1076.1	1066.2	1046.6	991.0	956.7
30°	1020.5	1015.5	987.7	915.8	889.6
32.5°	968.1	959.9	930.5	855.3	834.0
35°	914.2	907.6	863.5	798.0	778.4
37.5°	860.2	852.0	796.4	744.1	719.5
40°	806.2	796.4	735.9	688.5	662.3
42.5°	755.5	742.4	683.6	632.9	603.4
45°	701.6	686.8	628.0	575.6	552.7
47.5°	647.6	634.5	580.5	526.6	500.4
50°	590.4	578.9	529.8	475.9	448.1
52.5°	542.9	524.9	477.5	423.6	400.7
55°	487.3	472.6	428.5	377.8	358.1
57.5°	436.6	421.9	381.0	333.6	317.3
60°	389.2	368.0	333.6	292.7	279.6
62.5°	336.9	320.5	291.1	256.7	273.1
65°	289.5	273.1	246.9	251.8	209.3
67.5°	237.1	228.9	206.1	183.2	176.6
70°	193.0	183.2	175.0	150.5	143.9
72.5°	153.7	143.9	132.5	119.4	114.5
75°	116.1	107.9	101.4	96.5	106.3
77.5°	80.1	76.9	72.0	67.0	65.4
80°	52.3	50.7	49.1	47.4	45.8
82.5°	31.1	31.1	31.1	31.1	31.1
85°	16.4	18.0	19.6	21.3	22.9
87.5°	9.8	9.8	11.4	13.1	14.7
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)