

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: P545815

Luminaire Tested: **FMR-12-4-LD4-1HI-35-UNV-80-84-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: P545815
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-LD4-1HI-35-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

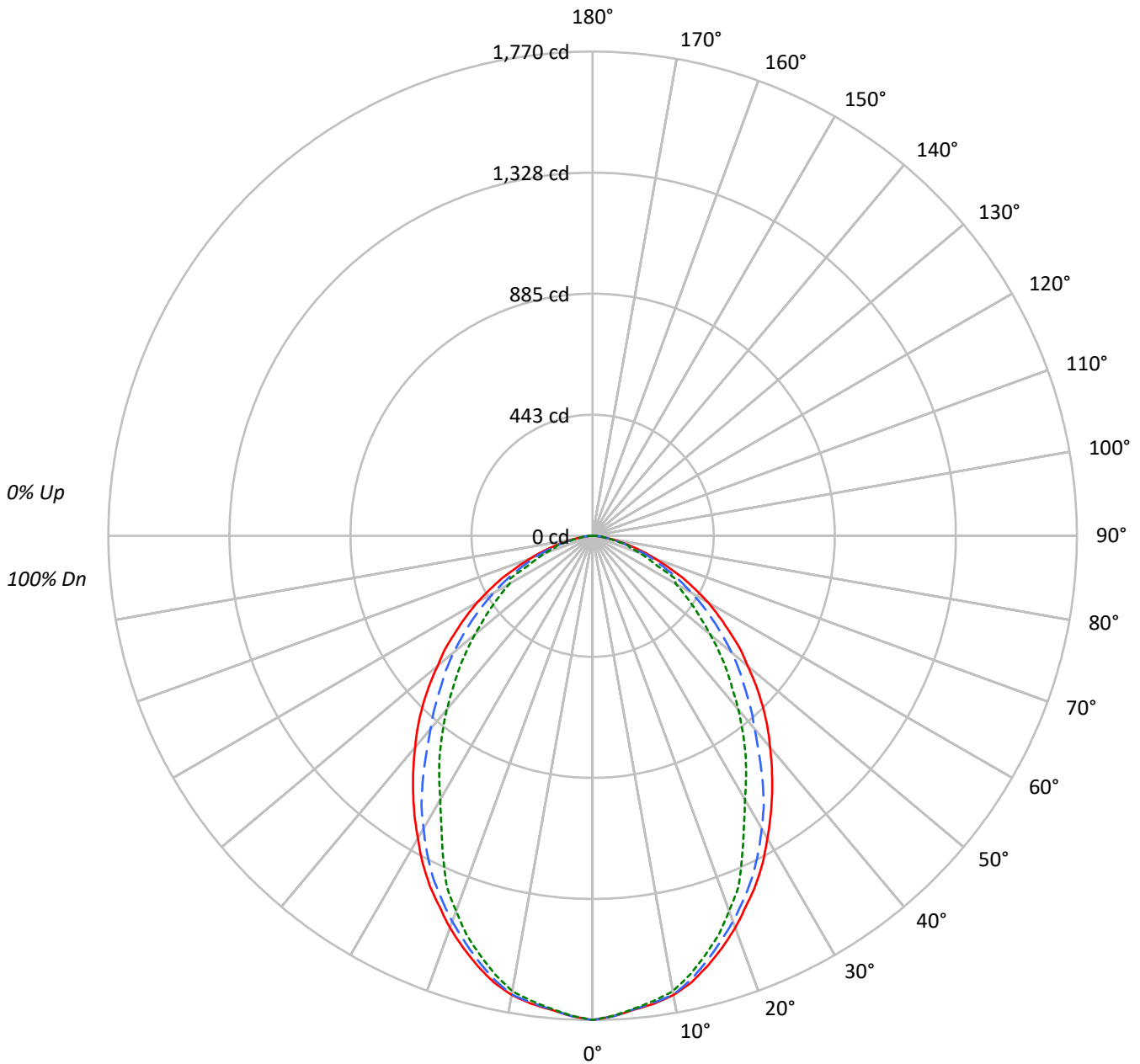
Lumens per Lamp: N/A
Luminaire Lumens: 3475.0 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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			100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4763	4763	4763
5°	4699	4693	4687
10°	4658	4652	4619
15°	4532	4487	4424
20°	4366	4296	4178
25°	4187	4095	3840
30°	3968	3841	3459
35°	3758	3550	3200
40°	3544	3235	2911
45°	3341	2990	2632
50°	3093	2776	2347
55°	2861	2516	2103
60°	2621	2247	1883
65°	2306	1968	1668
70°	1900	1723	1417
75°	1511	1319	1383
80°	1015	951	888
85°	633	760	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.8	4.7
10°-20°	452.2	13.0
20°-30°	626.1	18.0
30°-40°	667.6	19.2
40°-50°	609.0	17.5
50°-60°	477.1	13.7
60°-70°	311.0	8.9
70°-80°	137.8	4.0
80°-90°	29.6	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°	1243.0	35.8
0°-40°	1910.6	55.0
0°-60°	2996.7	86.2
0°-90°	3475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1770	1770	1770	1770	1770	
5°	1739	1737	1737	1735	1735	165
15°	1627	1627	1610	1594	1588	457
25°	1410	1402	1379	1330	1293	647
35°	1144	1136	1080	999	974	715
45°	878	860	786	720	692	676
55°	610	591	536	473	448	547
65°	362	342	309	315	262	357
75°	145	135	127	121	133	156
85°	20	22	25	27	29	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1770.1	1770.1	1770.1	1770.1	1770.1
2.5°	1757.8	1757.8	1757.8	1755.8	1755.8
5°	1739.4	1737.4	1737.4	1735.3	1735.3
7.5°	1725.1	1723.1	1721.0	1719.0	1714.9
10°	1704.6	1704.6	1702.6	1692.4	1690.3
12.5°	1671.9	1669.8	1661.7	1647.3	1643.2
15°	1626.9	1626.9	1610.5	1594.1	1588.0
17.5°	1577.8	1575.7	1555.2	1538.9	1530.7
20°	1524.6	1520.5	1500.0	1473.4	1459.1
22.5°	1465.2	1465.2	1440.7	1405.9	1391.5
25°	1410.0	1401.8	1379.3	1330.1	1293.3
27.5°	1346.5	1334.2	1309.7	1240.1	1197.1
30°	1276.9	1270.8	1236.0	1146.0	1113.2
32.5°	1211.5	1201.2	1164.4	1070.3	1043.7
35°	1143.9	1135.7	1080.5	998.6	974.1
37.5°	1076.4	1066.2	996.6	931.1	900.4
40°	1008.9	996.6	920.9	861.5	828.8
42.5°	945.4	929.1	855.4	791.9	755.1
45°	877.9	859.5	785.8	720.3	691.7
47.5°	810.4	794.0	726.5	658.9	626.2
50°	738.7	724.4	663.0	595.5	560.7
52.5°	679.4	656.9	597.5	530.0	501.4
55°	609.8	591.4	536.2	472.7	448.2
57.5°	546.4	528.0	476.8	417.5	397.0
60°	487.0	460.4	417.5	366.3	349.9
62.5°	421.6	401.1	364.3	321.3	341.7
65°	362.2	341.7	309.0	315.1	261.9
67.5°	296.7	286.5	257.8	229.2	221.0
70°	241.5	229.2	219.0	188.3	180.1
72.5°	192.4	180.1	165.8	149.4	143.2
75°	145.3	135.1	126.9	120.7	133.0
77.5°	100.3	96.2	90.0	83.9	81.9
80°	65.5	63.4	61.4	59.3	57.3
82.5°	38.9	38.9	38.9	38.9	38.9
85°	20.5	22.5	24.6	26.6	28.6
87.5°	12.3	12.3	14.3	16.4	18.4
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)