

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: P545560

Luminaire Tested: **FMR-12-2-LD4-2HI-40-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: P545560
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-12-2-LD4-2HI-40-UNV-80-85-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

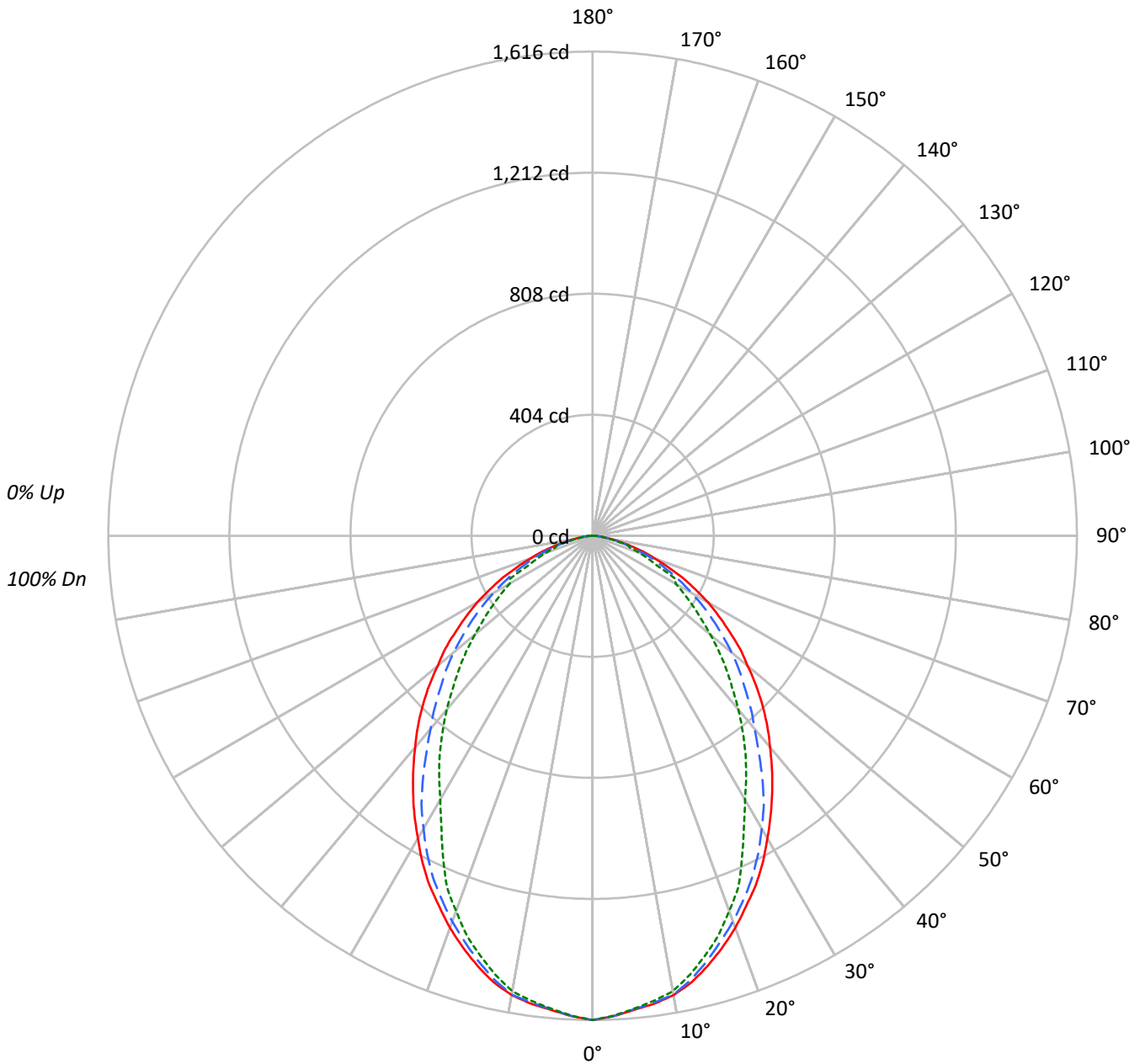
Lumens per Lamp: N/A
Luminaire Lumens: 3173.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
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°	8699	8699	8699
5°	8581	8571	8560
10°	8506	8496	8435
15°	8277	8193	8079
20°	7973	7844	7631
25°	7645	7479	7013
30°	7246	7014	6317
35°	6863	6482	5843
40°	6472	5907	5317
45°	6101	5461	4807
50°	5647	5069	4287
55°	5225	4594	3840
60°	4787	4103	3439
65°	4211	3592	3046
70°	3470	3146	2587
75°	2759	2408	2527
80°	1853	1739	1621
85°	1155	1383	1618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	4.7
10°-20°	412.9	13.0
20°-30°	571.6	18.0
30°-40°	609.5	19.2
40°-50°	556.1	17.5
50°-60°	435.6	13.7
60°-70°	283.9	8.9
70°-80°	125.8	4.0
80°-90°	27.0	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°	1135.0	35.8
0°-40°	1744.5	55.0
0°-60°	2736.3	86.2
0°-90°	3173.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3173.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1616	1616	1616	1616	1616	
5°	1588	1586	1586	1584	1584	151
15°	1486	1486	1470	1456	1450	418
25°	1287	1280	1259	1214	1181	591
35°	1044	1037	987	912	889	653
45°	802	785	718	658	632	617
55°	557	540	490	432	409	499
65°	331	312	282	288	239	326
75°	133	123	116	110	122	142
85°	19	21	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1616.3	1616.3	1616.3	1616.3	1616.3
2.5°	1605.1	1605.1	1605.1	1603.2	1603.2
5°	1588.3	1586.4	1586.4	1584.5	1584.5
7.5°	1575.2	1573.3	1571.4	1569.6	1565.8
10°	1556.5	1556.5	1554.6	1545.3	1543.4
12.5°	1526.6	1524.7	1517.3	1504.2	1500.4
15°	1485.5	1485.5	1470.5	1455.6	1450.0
17.5°	1440.6	1438.8	1420.1	1405.1	1397.7
20°	1392.1	1388.3	1369.6	1345.3	1332.3
22.5°	1337.9	1337.9	1315.4	1283.7	1270.6
25°	1287.4	1279.9	1259.4	1214.5	1180.9
27.5°	1229.5	1218.3	1195.9	1132.3	1093.1
30°	1166.0	1160.4	1128.6	1046.4	1016.5
32.5°	1106.2	1096.8	1063.2	977.2	953.0
35°	1044.5	1037.0	986.6	911.8	889.4
37.5°	982.9	973.5	910.0	850.2	822.2
40°	921.2	910.0	840.8	786.7	756.8
42.5°	863.3	848.3	781.0	723.1	689.5
45°	801.6	784.8	717.5	657.7	631.6
47.5°	739.9	725.0	663.3	601.7	571.8
50°	674.5	661.5	605.4	543.7	512.0
52.5°	620.4	599.8	545.6	484.0	457.8
55°	556.8	540.0	489.6	431.6	409.2
57.5°	498.9	482.1	435.4	381.2	362.5
60°	444.7	420.4	381.2	334.5	319.5
62.5°	384.9	366.2	332.6	293.4	312.0
65°	330.7	312.0	282.1	287.8	239.2
67.5°	270.9	261.6	235.4	209.3	201.8
70°	220.5	209.3	199.9	171.9	164.4
72.5°	175.6	164.4	151.4	136.4	130.8
75°	132.7	123.3	115.8	110.2	121.5
77.5°	91.6	87.8	82.2	76.6	74.7
80°	59.8	57.9	56.1	54.2	52.3
82.5°	35.5	35.5	35.5	35.5	35.5
85°	18.7	20.6	22.4	24.3	26.2
87.5°	11.2	11.2	13.1	14.9	16.8
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)