

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: P545567

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-81-84-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: P545567
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-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

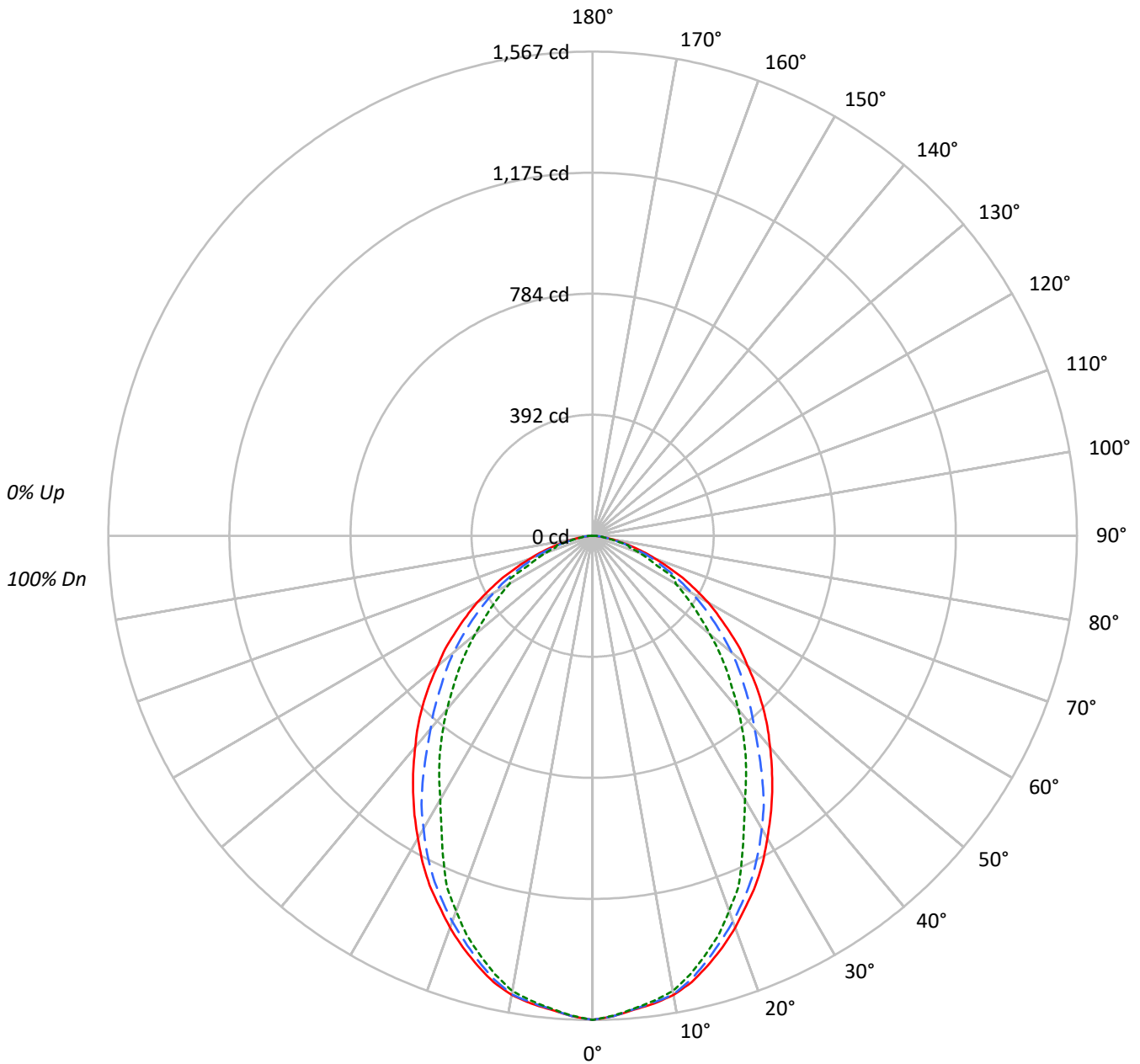
Lumens per Lamp: N/A
Luminaire Lumens: 3076.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8433	8433	8433
5°	8318	8309	8299
10°	8246	8236	8177
15°	8024	7943	7832
20°	7729	7605	7397
25°	7412	7250	6798
30°	7024	6799	6124
35°	6653	6284	5665
40°	6274	5727	5154
45°	5915	5294	4660
50°	5475	4914	4155
55°	5065	4453	3722
60°	4640	3977	3335
65°	4083	3483	2953
70°	3363	3050	2508
75°	2674	2335	2447
80°	1798	1683	1571
85°	1118	1340	1568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.9	4.7
10°-20°	400.3	13.0
20°-30°	554.2	18.0
30°-40°	590.9	19.2
40°-50°	539.1	17.5
50°-60°	422.3	13.7
60°-70°	275.2	8.9
70°-80°	121.9	4.0
80°-90°	26.2	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°	1100.3	35.8
0°-40°	1691.2	55.0
0°-60°	2652.6	86.2
0°-90°	3076.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3076.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1567	1567	1567	1567	1567	
5°	1540	1538	1538	1536	1536	146
15°	1440	1440	1426	1411	1406	405
25°	1248	1241	1221	1177	1145	573
35°	1013	1005	956	884	862	633
45°	777	761	696	638	612	599
55°	540	524	475	418	397	484
65°	321	302	274	279	232	316
75°	129	120	112	107	118	138
85°	18	20	22	24	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1566.9	1566.9	1566.9	1566.9	1566.9
2.5°	1556.0	1556.0	1556.0	1554.2	1554.2
5°	1539.7	1537.9	1537.9	1536.1	1536.1
7.5°	1527.0	1525.2	1523.4	1521.6	1518.0
10°	1508.9	1508.9	1507.1	1498.0	1496.2
12.5°	1479.9	1478.1	1470.9	1458.2	1454.6
15°	1440.1	1440.1	1425.6	1411.1	1405.7
17.5°	1396.6	1394.8	1376.7	1362.2	1354.9
20°	1349.5	1345.9	1327.8	1304.2	1291.5
22.5°	1297.0	1297.0	1275.2	1244.4	1231.8
25°	1248.1	1240.8	1220.9	1177.4	1144.8
27.5°	1191.9	1181.0	1159.3	1097.7	1059.7
30°	1130.3	1124.9	1094.1	1014.4	985.4
32.5°	1072.4	1063.3	1030.7	947.4	923.8
35°	1012.6	1005.3	956.4	884.0	862.2
37.5°	952.8	943.7	882.2	824.2	797.0
40°	893.0	882.2	815.1	762.6	733.6
42.5°	836.9	822.4	757.2	701.0	668.4
45°	777.1	760.8	695.6	637.6	612.3
47.5°	717.3	702.8	643.1	583.3	554.3
50°	653.9	641.2	586.9	527.1	496.3
52.5°	601.4	581.5	528.9	469.2	443.8
55°	539.8	523.5	474.6	418.4	396.7
57.5°	483.6	467.3	422.1	369.5	351.4
60°	431.1	407.6	369.5	324.2	309.8
62.5°	373.2	355.0	322.4	284.4	302.5
65°	320.6	302.5	273.5	279.0	231.9
67.5°	262.7	253.6	228.2	202.9	195.6
70°	213.7	202.9	193.8	166.7	159.4
72.5°	170.3	159.4	146.7	132.2	126.8
75°	128.6	119.6	112.3	106.9	117.7
77.5°	88.8	85.1	79.7	74.3	72.5
80°	58.0	56.2	54.3	52.5	50.7
82.5°	34.4	34.4	34.4	34.4	34.4
85°	18.1	19.9	21.7	23.5	25.4
87.5°	10.9	10.9	12.7	14.5	16.3
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)