

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: P545576

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-82-85-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: P545576
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-82-85-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

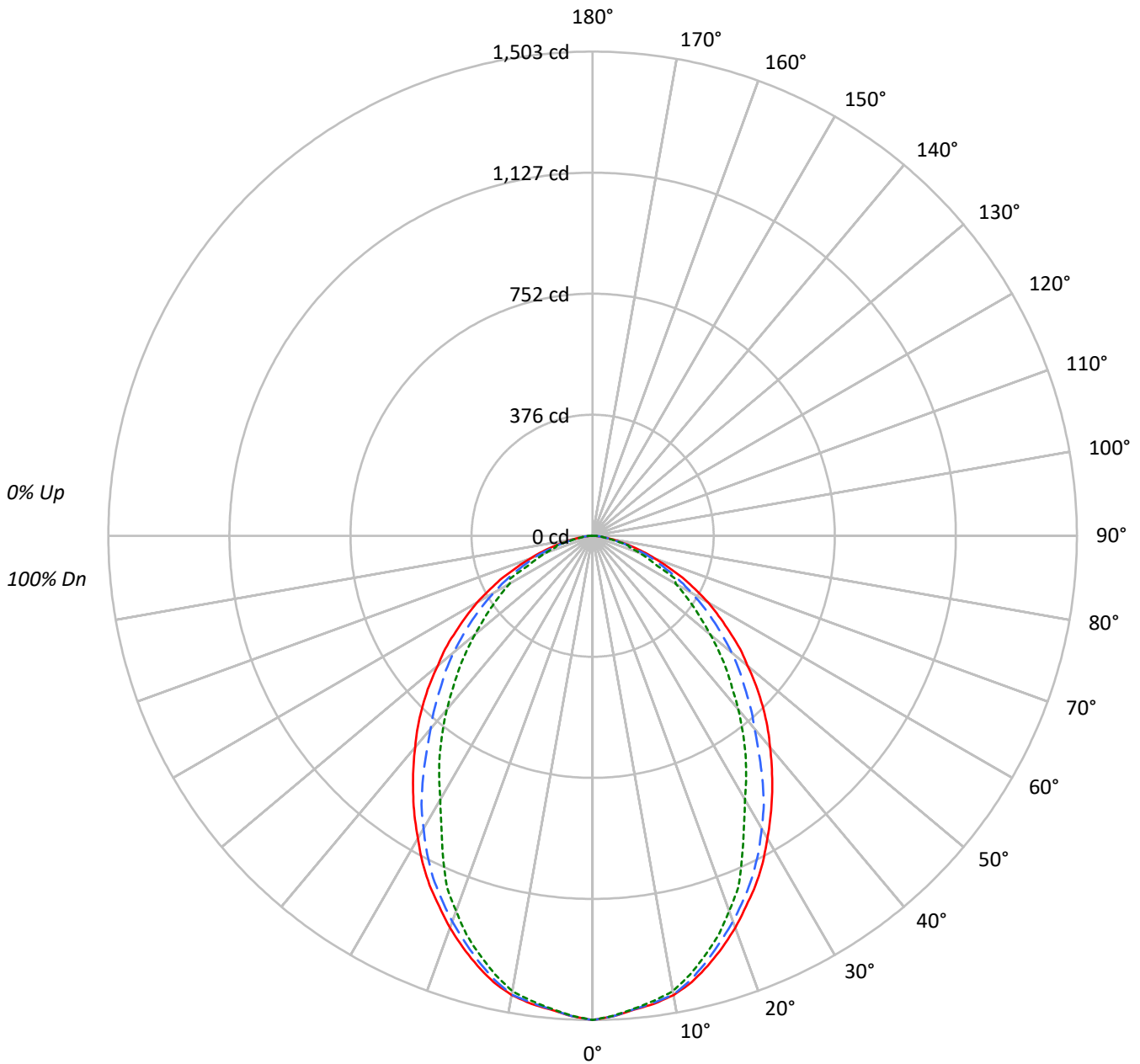
Lumens per Lamp: N/A
Luminaire Lumens: 2951.0 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8090	8090	8090
5°	7980	7971	7962
10°	7911	7902	7844
15°	7698	7621	7514
20°	7415	7296	7097
25°	7110	6956	6522
30°	6739	6523	5875
35°	6382	6029	5435
40°	6019	5494	4945
45°	5674	5079	4471
50°	5252	4714	3987
55°	4860	4272	3571
60°	4452	3816	3199
65°	3917	3342	2832
70°	3227	2925	2406
75°	2566	2240	2350
80°	1723	1615	1509
85°	1074	1291	1501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.9	4.7
10°-20°	384.0	13.0
20°-30°	531.7	18.0
30°-40°	566.9	19.2
40°-50°	517.2	17.5
50°-60°	405.2	13.7
60°-70°	264.1	8.9
70°-80°	117.0	4.0
80°-90°	25.1	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°	1055.6	35.8
0°-40°	1622.5	55.0
0°-60°	2544.8	86.2
0°-90°	2951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1503	1503	1503	1503	1503	
5°	1477	1475	1475	1474	1474	140
15°	1382	1382	1368	1354	1348	388
25°	1197	1190	1171	1130	1098	550
35°	971	964	918	848	827	607
45°	746	730	667	612	587	574
55°	518	502	455	401	381	465
65°	308	290	262	268	222	303
75°	123	115	108	102	113	132
85°	17	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1503.2	1503.2	1503.2	1503.2	1503.2
2.5°	1492.8	1492.8	1492.8	1491.0	1491.0
5°	1477.1	1475.4	1475.4	1473.7	1473.7
7.5°	1465.0	1463.2	1461.5	1459.8	1456.3
10°	1447.6	1447.6	1445.9	1437.2	1435.4
12.5°	1419.8	1418.0	1411.1	1398.9	1395.5
15°	1381.6	1381.6	1367.7	1353.7	1348.5
17.5°	1339.8	1338.1	1320.7	1306.8	1299.9
20°	1294.7	1291.2	1273.8	1251.2	1239.1
22.5°	1244.3	1244.3	1223.4	1193.9	1181.7
25°	1197.3	1190.4	1171.3	1129.6	1098.3
27.5°	1143.5	1133.0	1112.2	1053.1	1016.6
30°	1084.4	1079.2	1049.6	973.2	945.4
32.5°	1028.8	1020.1	988.8	908.9	886.3
35°	971.4	964.5	917.6	848.0	827.2
37.5°	914.1	905.4	846.3	790.7	764.6
40°	856.7	846.3	782.0	731.6	703.8
42.5°	802.9	789.0	726.4	672.5	641.2
45°	745.5	729.9	667.3	611.7	587.4
47.5°	688.2	674.3	616.9	559.6	531.8
50°	627.3	615.2	563.0	505.7	476.2
52.5°	577.0	557.8	507.4	450.1	425.8
55°	517.9	502.2	455.3	401.4	380.6
57.5°	464.0	448.4	404.9	354.5	337.1
60°	413.6	391.0	354.5	311.1	297.2
62.5°	358.0	340.6	309.3	272.8	290.2
65°	307.6	290.2	262.4	267.6	222.4
67.5°	252.0	243.3	219.0	194.6	187.7
70°	205.1	194.6	185.9	159.9	152.9
72.5°	163.4	152.9	140.8	126.9	121.6
75°	123.4	114.7	107.7	102.5	113.0
77.5°	85.2	81.7	76.5	71.2	69.5
80°	55.6	53.9	52.1	50.4	48.7
82.5°	33.0	33.0	33.0	33.0	33.0
85°	17.4	19.1	20.9	22.6	24.3
87.5°	10.4	10.4	12.2	13.9	15.6
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)