

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: P545543

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-82-84-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: P545543
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-35-UNV-82-84-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

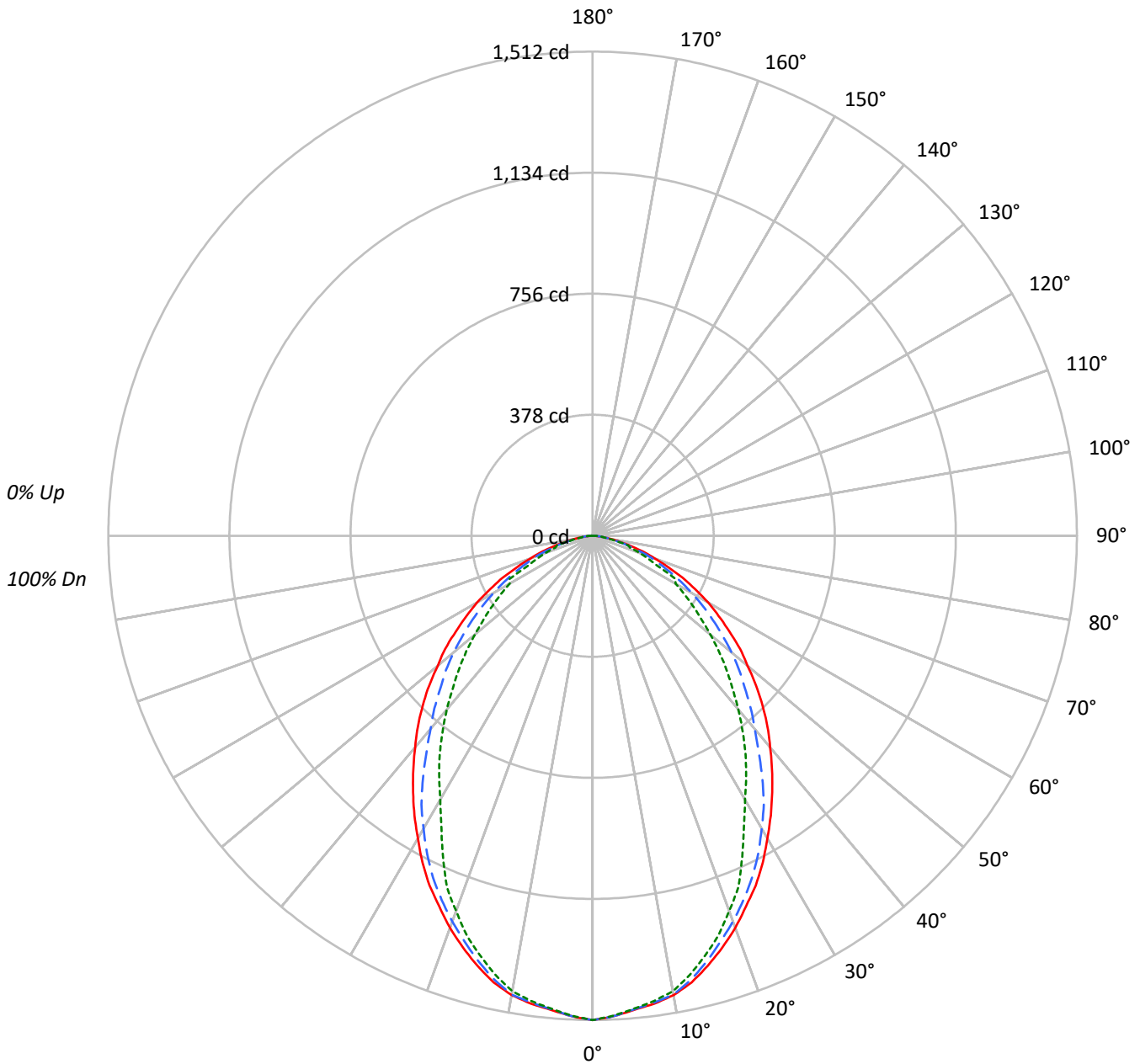
Lumens per Lamp: N/A
Luminaire Lumens: 2969.0 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8140	8140	8140
5°	8029	8019	8010
10°	7959	7950	7893
15°	7745	7667	7560
20°	7460	7340	7140
25°	7153	6998	6562
30°	6780	6563	5911
35°	6422	6066	5468
40°	6056	5528	4975
45°	5709	5110	4498
50°	5285	4743	4011
55°	4889	4298	3593
60°	4479	3839	3218
65°	3941	3362	2850
70°	3246	2944	2422
75°	2581	2254	2362
80°	1733	1627	1519
85°	1081	1297	1513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	4.7
10°-20°	386.4	13.0
20°-30°	534.9	18.0
30°-40°	570.4	19.2
40°-50°	520.3	17.5
50°-60°	407.6	13.7
60°-70°	265.7	8.9
70°-80°	117.7	4.0
80°-90°	25.3	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°	1062.0	35.8
0°-40°	1632.4	55.0
0°-60°	2560.4	86.2
0°-90°	2969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2969.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1512	1512	1512	1512	1512	
5°	1486	1484	1484	1483	1483	141
15°	1390	1390	1376	1362	1357	391
25°	1205	1198	1178	1136	1105	553
35°	977	970	923	853	832	611
45°	750	734	671	615	591	578
55°	521	505	458	404	383	467
65°	310	292	264	269	224	305
75°	124	115	108	103	114	133
85°	18	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°	1512.4	1512.4	1512.4	1512.4	1512.4
2.5°	1501.9	1501.9	1501.9	1500.1	1500.1
5°	1486.1	1484.4	1484.4	1482.6	1482.6
7.5°	1473.9	1472.2	1470.4	1468.7	1465.2
10°	1456.4	1456.4	1454.7	1445.9	1444.2
12.5°	1428.4	1426.7	1419.7	1407.5	1404.0
15°	1390.0	1390.0	1376.0	1362.0	1356.8
17.5°	1348.0	1346.3	1328.8	1314.8	1307.8
20°	1302.6	1299.1	1281.6	1258.9	1246.6
22.5°	1251.9	1251.9	1230.9	1201.2	1188.9
25°	1204.6	1197.7	1178.4	1136.5	1105.0
27.5°	1150.4	1140.0	1119.0	1059.5	1022.8
30°	1091.0	1085.8	1056.0	979.1	951.1
32.5°	1035.1	1026.3	994.8	914.4	891.7
35°	977.4	970.4	923.2	853.2	832.2
37.5°	919.7	910.9	851.5	795.5	769.3
40°	862.0	851.5	786.8	736.1	708.1
42.5°	807.8	793.8	730.8	676.6	645.2
45°	750.1	734.3	671.4	615.4	591.0
47.5°	692.4	678.4	620.7	563.0	535.0
50°	631.2	618.9	566.5	508.8	479.1
52.5°	580.5	561.2	510.5	452.8	428.4
55°	521.0	505.3	458.1	403.9	382.9
57.5°	466.8	451.1	407.4	356.7	339.2
60°	416.1	393.4	356.7	313.0	299.0
62.5°	360.2	342.7	311.2	274.5	292.0
65°	309.5	292.0	264.0	269.3	223.8
67.5°	253.5	244.8	220.3	195.8	188.8
70°	206.3	195.8	187.1	160.9	153.9
72.5°	164.3	153.9	141.6	127.6	122.4
75°	124.1	115.4	108.4	103.2	113.6
77.5°	85.7	82.2	76.9	71.7	69.9
80°	55.9	54.2	52.5	50.7	49.0
82.5°	33.2	33.2	33.2	33.2	33.2
85°	17.5	19.2	21.0	22.7	24.5
87.5°	10.5	10.5	12.2	14.0	15.7
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)