

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: P545536

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-81-85-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: P545536
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-81-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

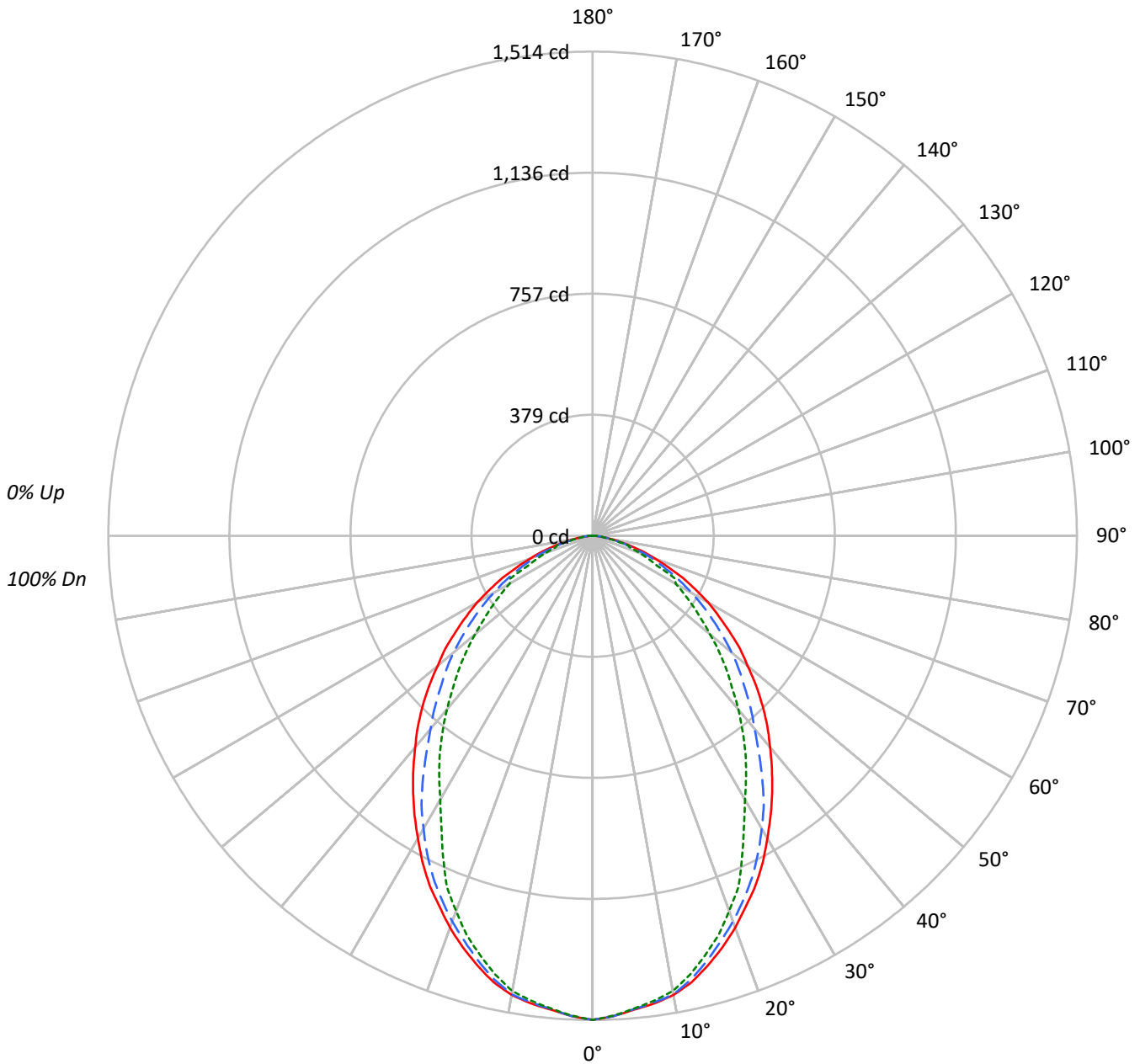
Lumens per Lamp: N/A
Luminaire Lumens: 2972.0 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8148	8148	8148
5°	8037	8028	8018
10°	7967	7958	7900
15°	7753	7675	7567
20°	7468	7348	7147
25°	7161	7005	6568
30°	6787	6569	5917
35°	6428	6071	5474
40°	6062	5533	4980
45°	5715	5116	4503
50°	5290	4748	4015
55°	4894	4302	3597
60°	4483	3843	3222
65°	3945	3366	2853
70°	3249	2947	2423
75°	2585	2256	2366
80°	1736	1627	1519
85°	1081	1297	1513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.9	4.7
10°-20°	386.8	13.0
20°-30°	535.4	18.0
30°-40°	570.9	19.2
40°-50°	520.9	17.5
50°-60°	408.0	13.7
60°-70°	265.9	8.9
70°-80°	117.8	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°	1063.1	35.8
0°-40°	1634.0	55.0
0°-60°	2562.9	86.2
0°-90°	2972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1514	1514	1514	1514	1514	
5°	1488	1486	1486	1484	1484	141
15°	1391	1391	1377	1363	1358	391
25°	1206	1199	1180	1138	1106	554
35°	978	971	924	854	833	612
45°	751	735	672	616	592	578
55°	522	506	458	404	383	468
65°	310	292	264	270	224	305
75°	124	116	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°	1513.9	1513.9	1513.9	1513.9	1513.9
2.5°	1503.4	1503.4	1503.4	1501.6	1501.6
5°	1487.6	1485.9	1485.9	1484.1	1484.1
7.5°	1475.4	1473.6	1471.9	1470.1	1466.6
10°	1457.9	1457.9	1456.1	1447.4	1445.6
12.5°	1429.9	1428.1	1421.1	1408.9	1405.4
15°	1391.4	1391.4	1377.4	1363.4	1358.1
17.5°	1349.4	1347.6	1330.1	1316.1	1309.1
20°	1303.9	1300.4	1282.9	1260.1	1247.9
22.5°	1253.1	1253.1	1232.1	1202.4	1190.1
25°	1205.9	1198.9	1179.6	1137.6	1106.1
27.5°	1151.6	1141.1	1120.1	1060.6	1023.8
30°	1092.1	1086.9	1057.1	980.1	952.1
32.5°	1036.1	1027.3	995.8	915.3	892.6
35°	978.3	971.3	924.1	854.1	833.1
37.5°	920.6	911.8	852.3	796.3	770.1
40°	862.8	852.3	787.6	736.8	708.8
42.5°	808.6	794.6	731.6	677.3	645.8
45°	750.8	735.1	672.1	616.1	591.6
47.5°	693.1	679.1	621.3	563.6	535.6
50°	631.8	619.6	567.1	509.3	479.5
52.5°	581.1	561.8	511.0	453.3	428.8
55°	521.6	505.8	458.5	404.3	383.3
57.5°	467.3	451.5	407.8	357.0	339.5
60°	416.5	393.8	357.0	313.3	299.3
62.5°	360.5	343.0	311.5	274.8	292.3
65°	309.8	292.3	264.3	269.5	224.0
67.5°	253.8	245.0	220.5	196.0	189.0
70°	206.5	196.0	187.3	161.0	154.0
72.5°	164.5	154.0	141.8	127.8	122.5
75°	124.3	115.5	108.5	103.3	113.8
77.5°	85.8	82.3	77.0	71.8	70.0
80°	56.0	54.3	52.5	50.8	49.0
82.5°	33.3	33.3	33.3	33.3	33.3
85°	17.5	19.3	21.0	22.8	24.5
87.5°	10.5	10.5	12.3	14.0	15.8
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)