

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: P545538

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-81-87-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: P545538
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-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

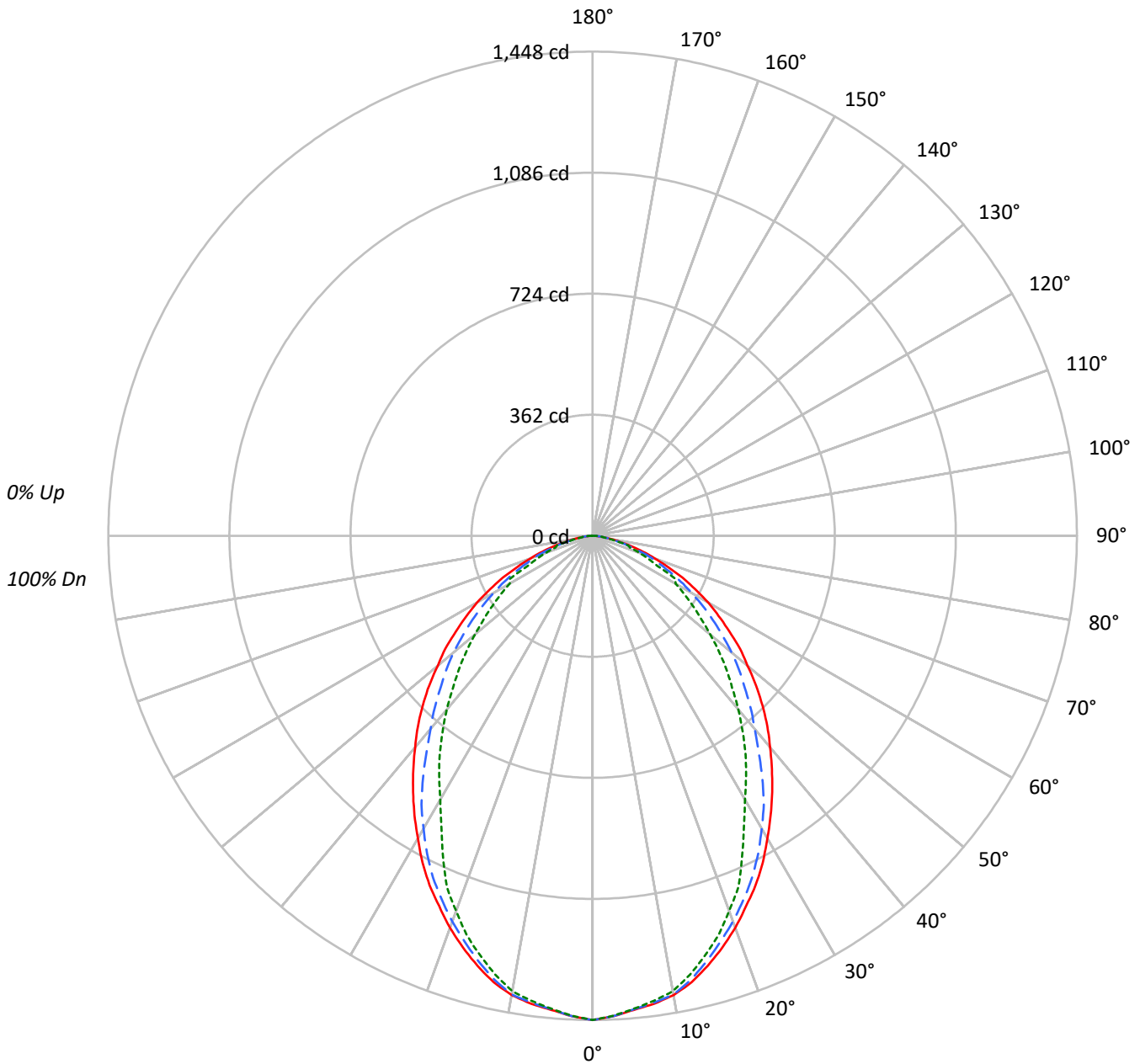
Lumens per Lamp: N/A
Luminaire Lumens: 2843.0 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				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			
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°	7794	7794	7794
5°	7688	7679	7670
10°	7621	7612	7558
15°	7416	7341	7239
20°	7144	7029	6837
25°	6850	6701	6283
30°	6492	6284	5660
35°	6149	5808	5236
40°	5799	5293	4764
45°	5466	4893	4307
50°	5061	4541	3841
55°	4681	4115	3441
60°	4289	3676	3082
65°	3773	3219	2729
70°	3109	2818	2318
75°	2472	2158	2262
80°	1661	1556	1454
85°	1031	1241	1445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	4.7
10°-20°	370.0	13.0
20°-30°	512.2	18.0
30°-40°	546.1	19.2
40°-50°	498.2	17.5
50°-60°	390.3	13.7
60°-70°	254.4	8.9
70°-80°	112.7	4.0
80°-90°	24.2	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°	1017.0	35.8
0°-40°	1563.1	55.0
0°-60°	2451.7	86.2
0°-90°	2843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1423	1421	1421	1420	1420	135
15°	1331	1331	1318	1304	1299	374
25°	1154	1147	1128	1088	1058	530
35°	936	929	884	817	797	585
45°	718	703	643	589	566	553
55°	499	484	439	387	367	447
65°	296	280	253	258	214	292
75°	119	110	104	99	109	127
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1448.2	1448.2	1448.2	1448.2	1448.2
2.5°	1438.1	1438.1	1438.1	1436.5	1436.5
5°	1423.1	1421.4	1421.4	1419.7	1419.7
7.5°	1411.4	1409.7	1408.0	1406.3	1403.0
10°	1394.6	1394.6	1392.9	1384.6	1382.9
12.5°	1367.8	1366.2	1359.5	1347.7	1344.4
15°	1331.0	1331.0	1317.6	1304.2	1299.2
17.5°	1290.8	1289.1	1272.4	1259.0	1252.3
20°	1247.3	1243.9	1227.2	1205.4	1193.7
22.5°	1198.7	1198.7	1178.6	1150.2	1138.5
25°	1153.5	1146.8	1128.4	1088.2	1058.1
27.5°	1101.6	1091.6	1071.5	1014.6	979.4
30°	1044.7	1039.7	1011.2	937.6	910.8
32.5°	991.1	982.8	952.6	875.6	853.8
35°	935.9	929.2	884.0	817.0	796.9
37.5°	880.6	872.3	815.3	761.8	736.6
40°	825.4	815.3	753.4	704.8	678.1
42.5°	773.5	760.1	699.8	647.9	617.8
45°	718.2	703.2	642.9	589.3	565.9
47.5°	663.0	649.6	594.3	539.1	512.3
50°	604.4	592.7	542.4	487.2	458.7
52.5°	555.8	537.4	488.9	433.6	410.2
55°	498.9	483.8	438.6	386.7	366.7
57.5°	447.0	431.9	390.1	341.5	324.8
60°	398.5	376.7	341.5	299.7	286.3
62.5°	344.9	328.1	298.0	262.8	279.6
65°	296.3	279.6	252.8	257.8	214.3
67.5°	242.8	234.4	210.9	187.5	180.8
70°	197.6	187.5	179.1	154.0	147.3
72.5°	157.4	147.3	135.6	122.2	117.2
75°	118.9	110.5	103.8	98.8	108.8
77.5°	82.0	78.7	73.7	68.6	67.0
80°	53.6	51.9	50.2	48.6	46.9
82.5°	31.8	31.8	31.8	31.8	31.8
85°	16.7	18.4	20.1	21.8	23.4
87.5°	10.0	10.0	11.7	13.4	15.1
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)