

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: P545321

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-82-86-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: P545321
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-LD4-1HI-50-UNV-82-86-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

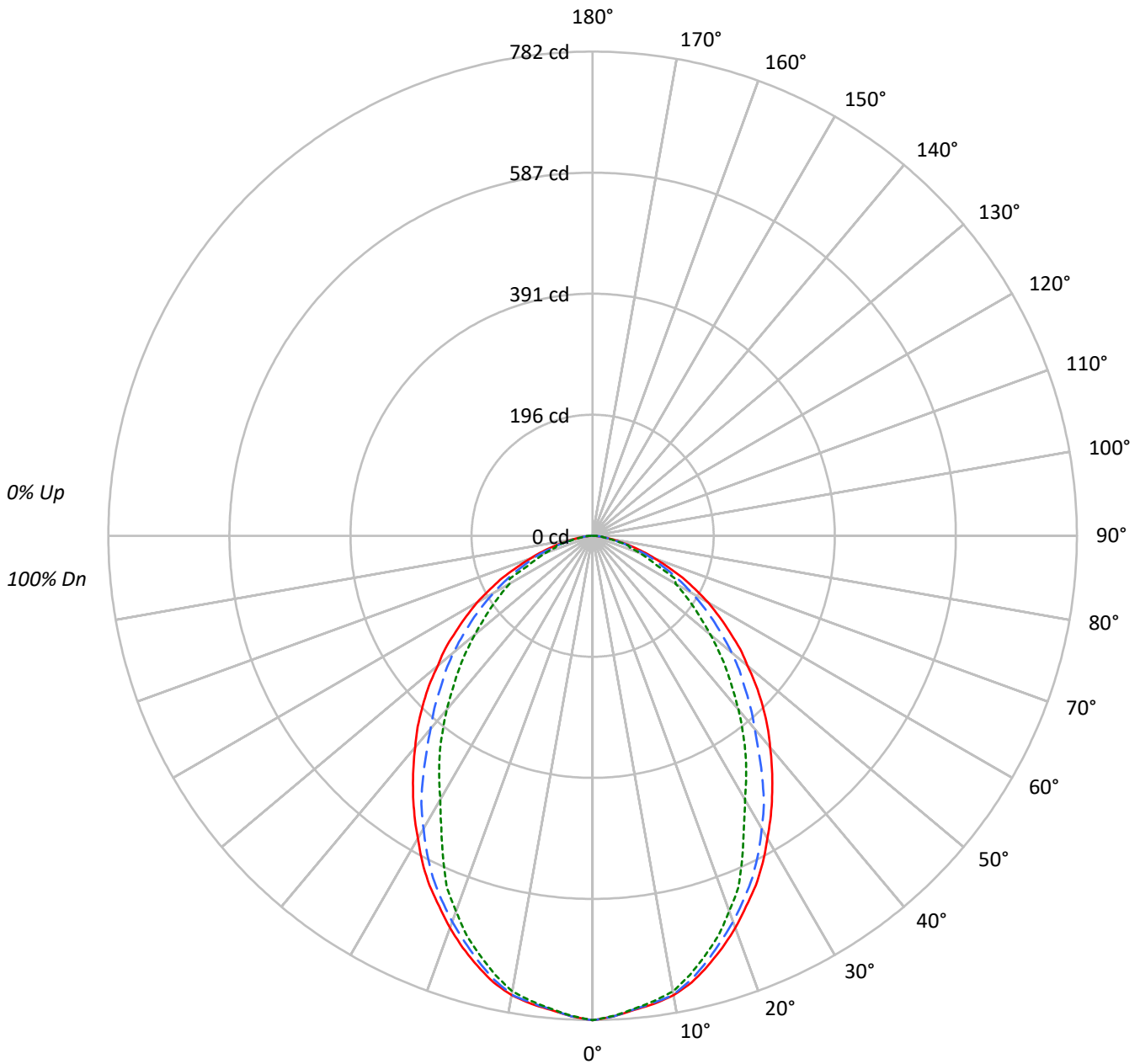
Lumens per Lamp: N/A
Luminaire Lumens: 1536.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	4211	4211	4211
5°	4153	4149	4144
10°	4118	4113	4083
15°	4007	3967	3911
20°	3860	3797	3694
25°	3701	3621	3395
30°	3507	3395	3058
35°	3322	3138	2829
40°	3133	2859	2573
45°	2953	2643	2327
50°	2734	2454	2075
55°	2529	2224	1859
60°	2317	1986	1665
65°	2039	1740	1475
70°	1679	1523	1253
75°	1335	1167	1223
80°	896	840	784
85°	556	673	784



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	4.7
10°-20°	199.9	13.0
20°-30°	276.7	18.0
30°-40°	295.1	19.2
40°-50°	269.2	17.5
50°-60°	210.9	13.7
60°-70°	137.5	8.9
70°-80°	60.9	4.0
80°-90°	13.1	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°	549.4	35.8
0°-40°	844.5	55.0
0°-60°	1324.6	86.2
0°-90°	1536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1536.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	782	782	782	782	782	
5°	769	768	768	767	767	73
15°	719	719	712	705	702	202
25°	623	620	610	588	572	286
35°	506	502	478	441	431	316
45°	388	380	347	318	306	299
55°	270	261	237	209	198	242
65°	160	151	137	139	116	158
75°	64	60	56	53	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	782.4	782.4	782.4	782.4	782.4
2.5°	777.0	777.0	777.0	776.1	776.1
5°	768.8	767.9	767.9	767.0	767.0
7.5°	762.5	761.6	760.7	759.8	758.0
10°	753.5	753.5	752.6	748.0	747.1
12.5°	739.0	738.1	734.5	728.1	726.3
15°	719.1	719.1	711.9	704.6	701.9
17.5°	697.4	696.5	687.4	680.2	676.6
20°	673.9	672.1	663.0	651.3	644.9
22.5°	647.6	647.6	636.8	621.4	615.1
25°	623.2	619.6	609.7	587.9	571.7
27.5°	595.2	589.8	578.9	548.1	529.1
30°	564.4	561.7	546.3	506.5	492.1
32.5°	535.5	531.0	514.7	473.1	461.3
35°	505.6	502.0	477.6	441.4	430.6
37.5°	475.8	471.3	440.5	411.6	398.0
40°	445.9	440.5	407.0	380.8	366.3
42.5°	417.9	410.7	378.1	350.1	333.8
45°	388.0	379.9	347.3	318.4	305.7
47.5°	358.2	351.0	321.1	291.3	276.8
50°	326.5	320.2	293.1	263.2	247.8
52.5°	300.3	290.4	264.1	234.3	221.6
55°	269.5	261.4	237.0	208.9	198.1
57.5°	241.5	233.4	210.8	184.5	175.5
60°	215.3	203.5	184.5	161.9	154.7
62.5°	186.3	177.3	161.0	142.0	151.1
65°	160.1	151.1	136.6	139.3	115.8
67.5°	131.2	126.6	114.0	101.3	97.7
70°	106.7	101.3	96.8	83.2	79.6
72.5°	85.0	79.6	73.3	66.0	63.3
75°	64.2	59.7	56.1	53.4	58.8
77.5°	44.3	42.5	39.8	37.1	36.2
80°	28.9	28.0	27.1	26.2	25.3
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.0	9.9	10.9	11.8	12.7
87.5°	5.4	5.4	6.3	7.2	8.1
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)