

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: P545257

Luminaire Tested: **FMR-12-2-LD4-1HI-35-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: P545257
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

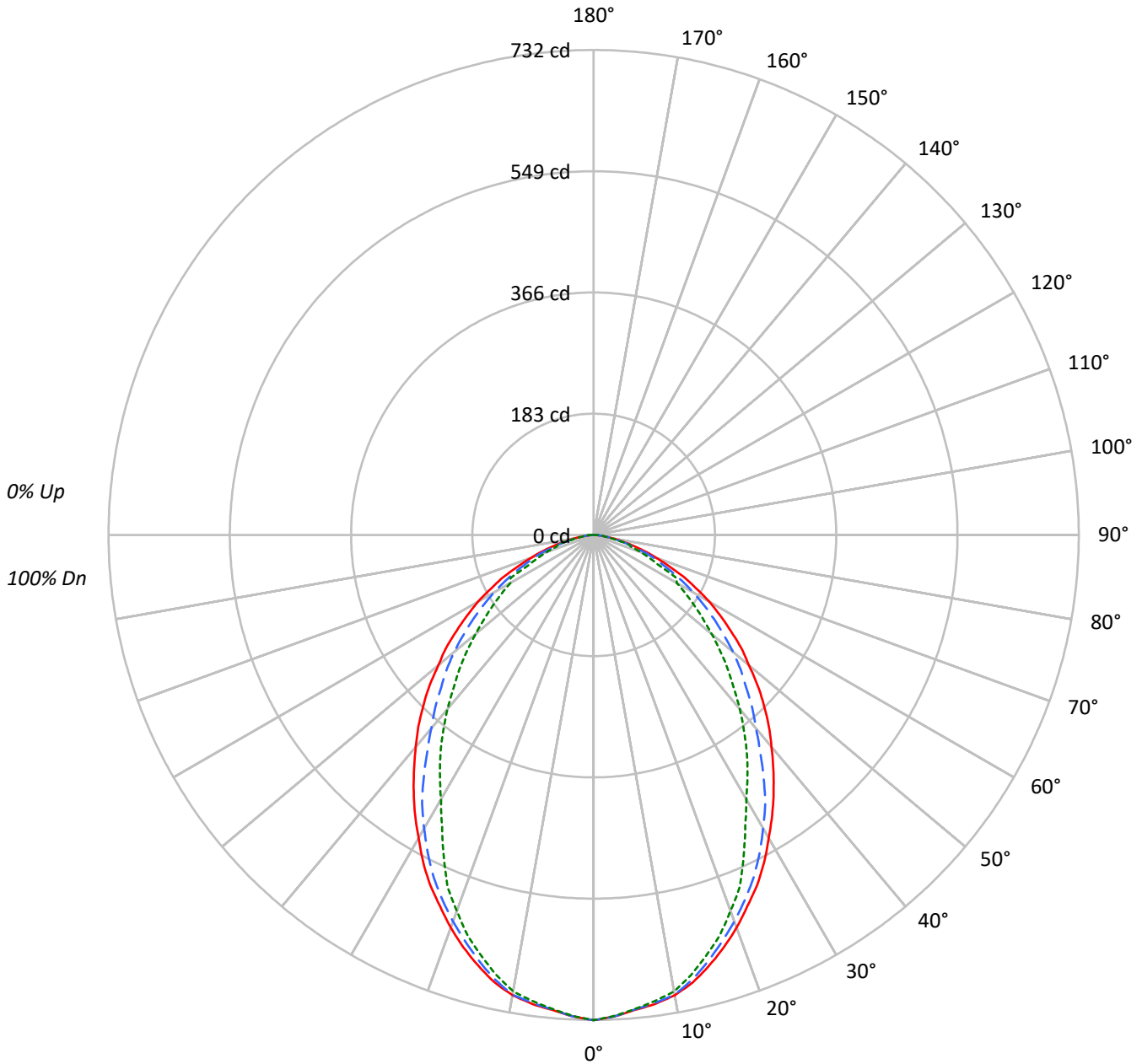
Lumens per Lamp: N/A
Luminaire Lumens: 1438.0 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	3942	3942	3942
5°	3889	3884	3880
10°	3855	3851	3823
15°	3751	3713	3661
20°	3613	3555	3458
25°	3465	3390	3178
30°	3284	3179	2863
35°	3110	2938	2648
40°	2933	2677	2410
45°	2765	2475	2178
50°	2560	2298	1942
55°	2368	2082	1741
60°	2169	1860	1559
65°	1909	1629	1380
70°	1572	1426	1172
75°	1250	1092	1144
80°	840	787	735
85°	525	630	735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	4.7
10°-20°	187.1	13.0
20°-30°	259.1	18.0
30°-40°	276.2	19.2
40°-50°	252.0	17.5
50°-60°	197.4	13.7
60°-70°	128.7	8.9
70°-80°	57.0	4.0
80°-90°	12.3	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°	514.4	35.8
0°-40°	790.6	55.0
0°-60°	1240.1	86.2
0°-90°	1438.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1438.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	720	719	719	718	718	68
15°	673	673	666	660	657	189
25°	584	580	571	550	535	268
35°	473	470	447	413	403	296
45°	363	356	325	298	286	280
55°	252	245	222	196	186	226
65°	150	141	128	130	108	148
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	732.5	732.5	732.5	732.5	732.5
2.5°	727.4	727.4	727.4	726.6	726.6
5°	719.8	718.9	718.9	718.1	718.1
7.5°	713.9	713.0	712.2	711.3	709.6
10°	705.4	705.4	704.6	700.3	699.5
12.5°	691.9	691.0	687.6	681.7	680.0
15°	673.2	673.2	666.4	659.7	657.1
17.5°	652.9	652.1	643.6	636.8	633.4
20°	630.9	629.2	620.7	609.7	603.8
22.5°	606.3	606.3	596.2	581.8	575.8
25°	583.5	580.1	570.8	550.4	535.2
27.5°	557.2	552.1	542.0	513.2	495.4
30°	528.4	525.9	511.5	474.2	460.7
32.5°	501.3	497.1	481.8	442.9	431.9
35°	473.4	470.0	447.1	413.2	403.1
37.5°	445.4	441.2	412.4	385.3	372.6
40°	417.5	412.4	381.1	356.5	343.0
42.5°	391.2	384.5	354.0	327.7	312.5
45°	363.3	355.7	325.2	298.1	286.2
47.5°	335.3	328.6	300.6	272.7	259.1
50°	305.7	299.8	274.4	246.4	232.0
52.5°	281.1	271.8	247.3	219.3	207.5
55°	252.4	244.7	221.9	195.6	185.5
57.5°	226.1	218.5	197.3	172.8	164.3
60°	201.5	190.5	172.8	151.6	144.8
62.5°	174.4	166.0	150.7	133.0	141.4
65°	149.9	141.4	127.9	130.4	108.4
67.5°	122.8	118.6	106.7	94.8	91.5
70°	99.9	94.8	90.6	77.9	74.5
72.5°	79.6	74.5	68.6	61.8	59.3
75°	60.1	55.9	52.5	50.0	55.0
77.5°	41.5	39.8	37.3	34.7	33.9
80°	27.1	26.3	25.4	24.6	23.7
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.2	11.0	11.9
87.5°	5.1	5.1	5.9	6.8	7.6
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)