

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: P545481

Luminaire Tested: **FMR-12-2-LD4-1STD-40-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: P545481
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-LD4-1STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

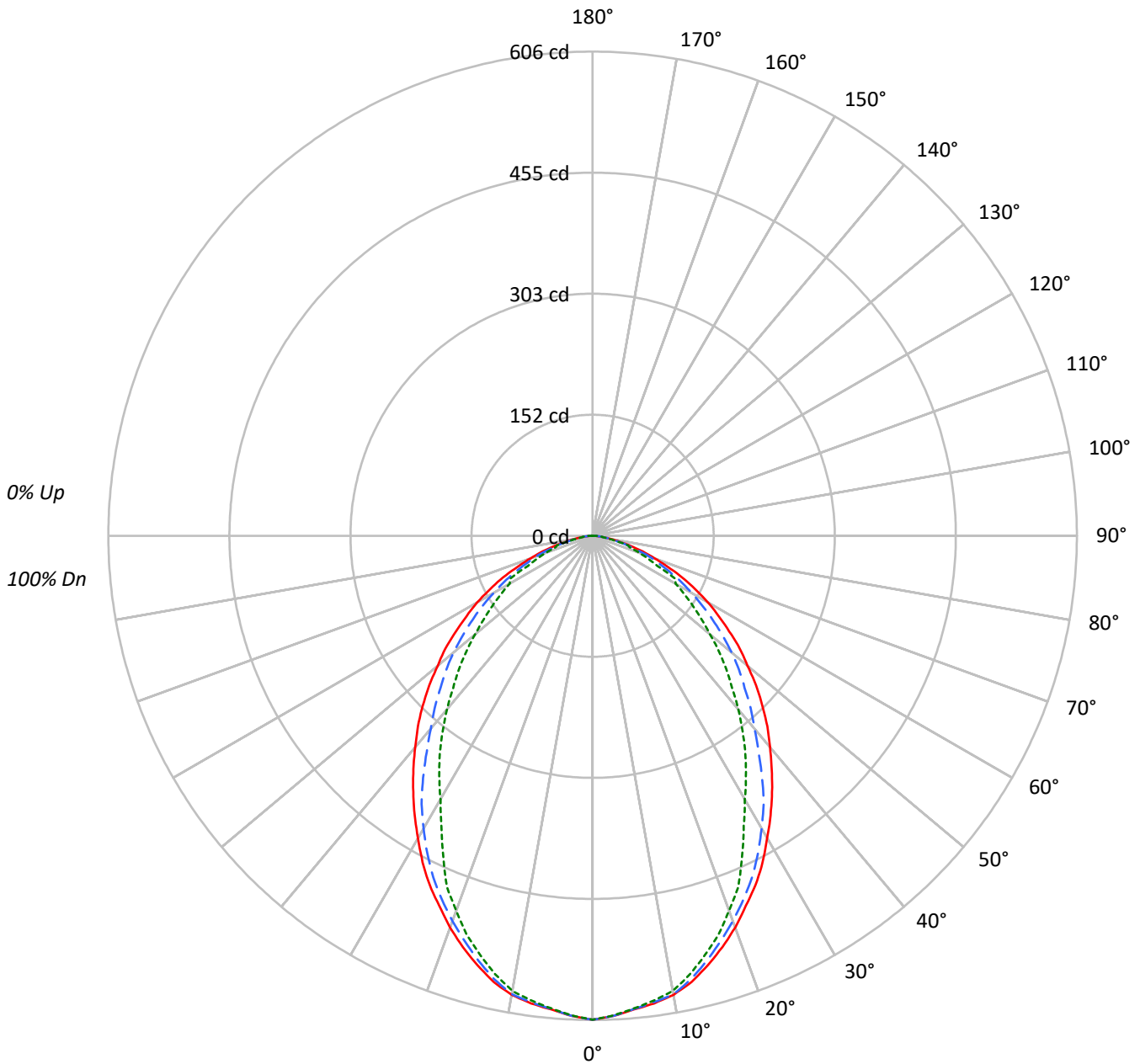
Lumens per Lamp: N/A
Luminaire Lumens: 1189.0 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	3260	3260	3260
5°	3216	3212	3208
10°	3188	3184	3161
15°	3101	3070	3027
20°	2987	2939	2859
25°	2865	2802	2628
30°	2715	2628	2367
35°	2572	2429	2190
40°	2425	2214	1992
45°	2286	2047	1802
50°	2117	1900	1607
55°	1958	1721	1438
60°	1793	1537	1288
65°	1578	1346	1141
70°	1300	1179	969
75°	1033	902	946
80°	694	651	607
85°	432	519	605



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.4	4.7
10°-20°	154.7	13.0
20°-30°	214.2	18.0
30°-40°	228.4	19.2
40°-50°	208.4	17.5
50°-60°	163.2	13.7
60°-70°	106.4	8.9
70°-80°	47.1	4.0
80°-90°	10.1	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°	425.3	35.8
0°-40°	653.7	55.0
0°-60°	1025.3	86.2
0°-90°	1189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	595	594	594	594	594	56
15°	557	557	551	545	543	156
25°	482	480	472	455	442	221
35°	391	389	370	342	333	245
45°	300	294	269	246	237	231
55°	209	202	183	162	153	187
65°	124	117	106	108	90	122
75°	50	46	43	41	46	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	605.7	605.7	605.7	605.7	605.7
2.5°	601.5	601.5	601.5	600.8	600.8
5°	595.2	594.5	594.5	593.8	593.8
7.5°	590.3	589.6	588.9	588.2	586.8
10°	583.3	583.3	582.6	579.1	578.4
12.5°	572.1	571.4	568.6	563.6	562.2
15°	556.6	556.6	551.0	545.4	543.3
17.5°	539.8	539.1	532.1	526.5	523.7
20°	521.6	520.2	513.2	504.1	499.2
22.5°	501.3	501.3	492.9	481.0	476.1
25°	482.4	479.6	471.9	455.1	442.5
27.5°	460.7	456.5	448.1	424.3	409.6
30°	436.9	434.8	422.9	392.1	380.9
32.5°	414.5	411.0	398.4	366.2	357.1
35°	391.4	388.6	369.7	341.7	333.3
37.5°	368.3	364.8	341.0	318.6	308.1
40°	345.2	341.0	315.1	294.8	283.6
42.5°	323.5	317.9	292.7	271.0	258.4
45°	300.4	294.1	268.9	246.5	236.7
47.5°	277.3	271.7	248.6	225.5	214.3
50°	252.8	247.9	226.9	203.8	191.9
52.5°	232.5	224.8	204.5	181.3	171.5
55°	208.7	202.4	183.4	161.7	153.3
57.5°	186.9	180.6	163.1	142.8	135.8
60°	166.6	157.5	142.8	125.3	119.7
62.5°	144.2	137.2	124.6	109.9	116.9
65°	123.9	116.9	105.7	107.8	89.6
67.5°	101.5	98.0	88.2	78.4	75.6
70°	82.6	78.4	74.9	64.4	61.6
72.5°	65.8	61.6	56.7	51.1	49.0
75°	49.7	46.2	43.4	41.3	45.5
77.5°	34.3	32.9	30.8	28.7	28.0
80°	22.4	21.7	21.0	20.3	19.6
82.5°	13.3	13.3	13.3	13.3	13.3
85°	7.0	7.7	8.4	9.1	9.8
87.5°	4.2	4.2	4.9	5.6	6.3
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)