

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: P547082

Luminaire Tested: **FMR-24-4-LD4-3LO-35-UNV-82-87-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: P547082
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-24-4-LD4-3LO-35-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 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

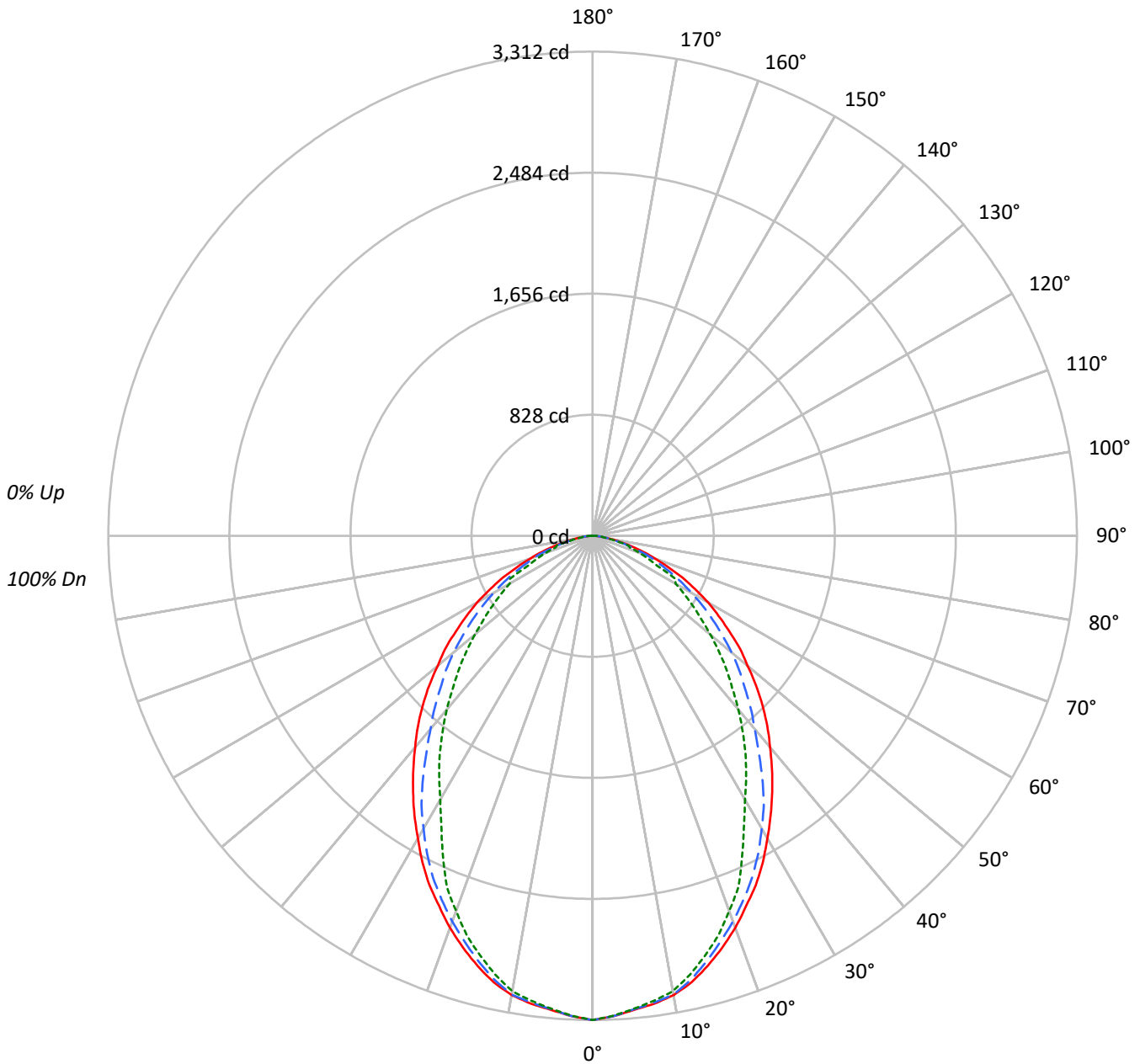
Lumens per Lamp: N/A
Luminaire Lumens: 6503.0 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4457	4457	4457
5°	4396	4391	4386
10°	4358	4353	4322
15°	4241	4198	4139
20°	4085	4019	3910
25°	3917	3832	3593
30°	3713	3594	3237
35°	3516	3321	2994
40°	3316	3027	2724
45°	3126	2798	2463
50°	2894	2597	2196
55°	2677	2354	1967
60°	2453	2102	1762
65°	2158	1841	1561
70°	1778	1612	1326
75°	1413	1234	1294
80°	949	890	831
85°	591	710	827



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	308.4	4.7
10°-20°	846.2	13.0
20°-30°	1171.6	18.0
30°-40°	1249.2	19.2
40°-50°	1139.7	17.5
50°-60°	892.8	13.7
60°-70°	581.9	8.9
70°-80°	257.8	4.0
80°-90°	55.4	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°	2326.2	35.8
0°-40°	3575.4	55.0
0°-60°	5607.9	86.2
0°-90°	6503.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6503.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3312	3312	3312	3312	3312	
5°	3255	3251	3251	3247	3247	309
15°	3044	3044	3014	2983	2972	856
25°	2638	2623	2581	2489	2420	1211
35°	2141	2125	2022	1869	1823	1338
45°	1643	1608	1470	1348	1294	1265
55°	1141	1107	1003	885	839	1024
65°	678	640	578	590	490	668
75°	272	253	237	226	249	291
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3312.5	3312.5	3312.5	3312.5	3312.5
2.5°	3289.6	3289.6	3289.6	3285.7	3285.7
5°	3255.1	3251.3	3251.3	3247.4	3247.4
7.5°	3228.3	3224.5	3220.6	3216.8	3209.1
10°	3190.0	3190.0	3186.2	3167.0	3163.2
12.5°	3128.7	3124.9	3109.6	3082.8	3075.1
15°	3044.5	3044.5	3013.8	2983.2	2971.7
17.5°	2952.6	2948.7	2910.4	2879.8	2864.5
20°	2853.0	2845.3	2807.0	2757.3	2730.5
22.5°	2741.9	2741.9	2696.0	2630.9	2604.1
25°	2638.5	2623.2	2581.1	2489.2	2420.3
27.5°	2519.8	2496.9	2450.9	2320.7	2240.3
30°	2389.6	2378.1	2313.0	2144.5	2083.3
32.5°	2267.1	2247.9	2179.0	2002.8	1953.1
35°	2140.7	2125.4	2022.0	1868.8	1822.9
37.5°	2014.3	1995.2	1865.0	1742.4	1685.0
40°	1888.0	1865.0	1723.3	1612.2	1551.0
42.5°	1769.2	1738.6	1600.7	1482.0	1413.1
45°	1642.9	1608.4	1470.5	1348.0	1294.4
47.5°	1516.5	1485.9	1359.5	1233.1	1171.8
50°	1382.5	1355.7	1240.8	1114.4	1049.3
52.5°	1271.4	1229.3	1118.2	991.8	938.2
55°	1141.2	1106.7	1003.3	884.6	838.7
57.5°	1022.5	988.0	892.3	781.2	742.9
60°	911.4	861.6	781.2	685.5	654.8
62.5°	788.9	750.6	681.7	601.2	639.5
65°	677.8	639.5	578.3	589.7	490.2
67.5°	555.3	536.1	482.5	428.9	413.6
70°	451.9	428.9	409.8	352.3	337.0
72.5°	360.0	337.0	310.2	279.6	268.1
75°	271.9	252.7	237.4	225.9	248.9
77.5°	187.6	180.0	168.5	157.0	153.2
80°	122.5	118.7	114.9	111.1	107.2
82.5°	72.8	72.8	72.8	72.8	72.8
85°	38.3	42.1	46.0	49.8	53.6
87.5°	23.0	23.0	26.8	30.6	34.5
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)