

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: P546142

Luminaire Tested: **FMR-12-4-LD4-2HI-40-UNV-80-97-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: P546142
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-12-4-LD4-2HI-40-UNV-80-97-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

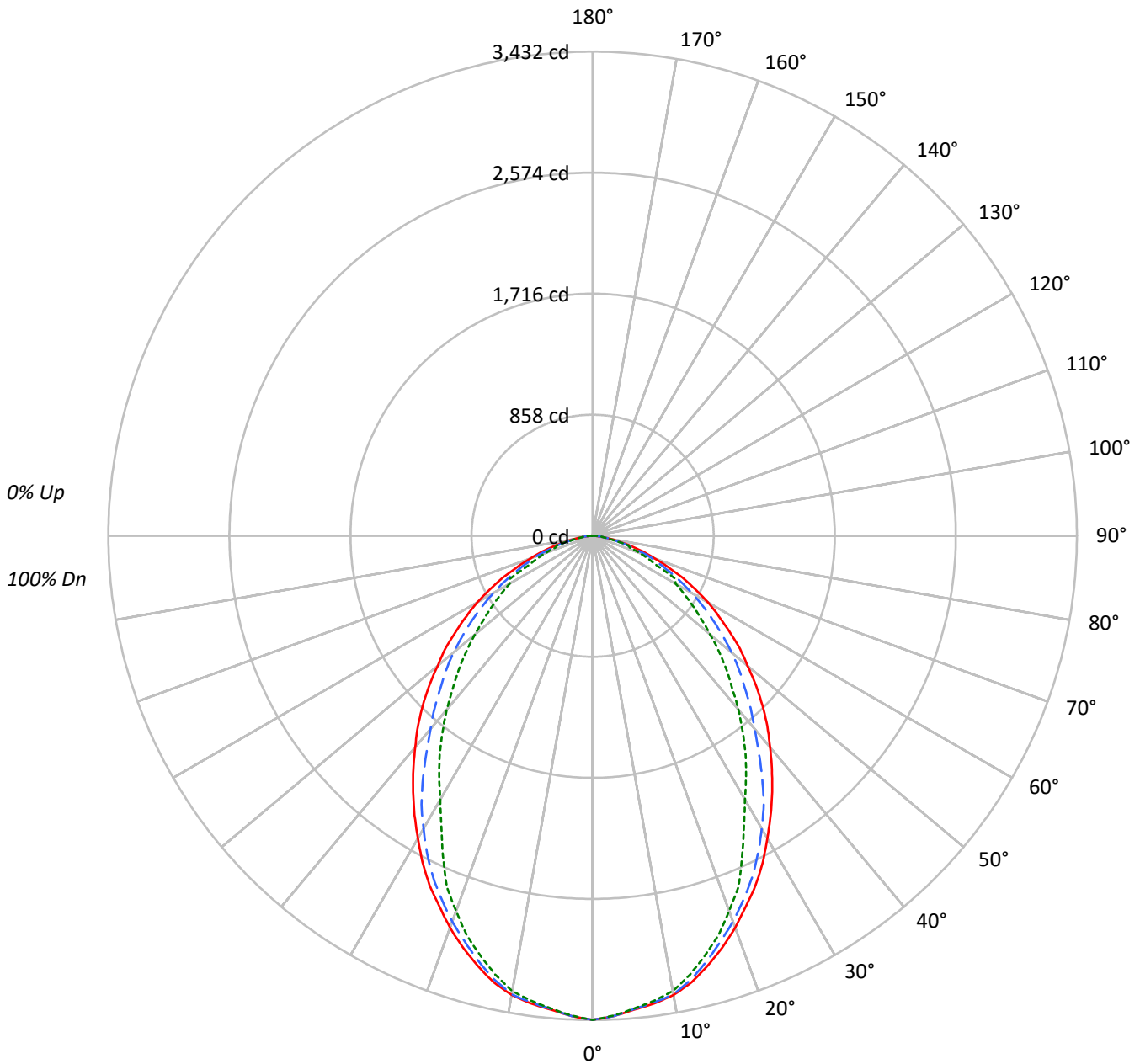
Lumens per Lamp: N/A
Luminaire Lumens: 6737.0 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	9235	9235	9235
5°	9109	9099	9088
10°	9030	9019	8954
15°	8787	8698	8577
20°	8464	8328	8100
25°	8116	7940	7445
30°	7692	7446	6706
35°	7285	6881	6204
40°	6871	6271	5644
45°	6477	5798	5103
50°	5996	5381	4551
55°	5547	4876	4076
60°	5082	4356	3651
65°	4471	3815	3233
70°	3683	3340	2747
75°	2929	2558	2681
80°	1968	1844	1722
85°	1226	1470	1714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.4	4.7
10°-20°	876.7	13.0
20°-30°	1213.7	18.0
30°-40°	1294.2	19.2
40°-50°	1180.7	17.5
50°-60°	925.0	13.7
60°-70°	602.8	8.9
70°-80°	267.1	4.0
80°-90°	57.3	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°	2409.9	35.8
0°-40°	3704.1	55.0
0°-60°	5809.7	86.2
0°-90°	6737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6737.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3432	3432	3432	3432	3432	
5°	3372	3368	3368	3364	3364	320
15°	3154	3154	3122	3090	3079	887
25°	2734	2718	2674	2579	2507	1255
35°	2218	2202	2095	1936	1888	1386
45°	1702	1666	1524	1396	1341	1311
55°	1182	1147	1039	916	869	1060
65°	702	662	599	611	508	692
75°	282	262	246	234	258	302
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3431.7	3431.7	3431.7	3431.7	3431.7
2.5°	3407.9	3407.9	3407.9	3404.0	3404.0
5°	3372.2	3368.3	3368.3	3364.3	3364.3
7.5°	3344.5	3340.5	3336.5	3332.6	3324.6
10°	3304.8	3304.8	3300.8	3281.0	3277.0
12.5°	3241.3	3237.3	3221.5	3193.7	3185.8
15°	3154.0	3154.0	3122.3	3090.5	3078.6
17.5°	3058.8	3054.8	3015.2	2983.4	2967.6
20°	2955.7	2947.7	2908.1	2856.5	2828.7
22.5°	2840.6	2840.6	2793.0	2725.6	2697.8
25°	2733.5	2717.6	2674.0	2578.8	2507.4
27.5°	2610.5	2586.7	2539.1	2404.2	2320.9
30°	2475.6	2463.7	2396.3	2221.7	2158.2
32.5°	2348.7	2328.8	2257.4	2074.9	2023.3
35°	2217.7	2201.9	2094.7	1936.1	1888.4
37.5°	2086.8	2067.0	1932.1	1805.1	1745.6
40°	1955.9	1932.1	1785.3	1670.2	1606.8
42.5°	1832.9	1801.2	1658.3	1535.4	1463.9
45°	1702.0	1666.3	1523.5	1396.5	1341.0
47.5°	1571.1	1539.3	1408.4	1277.5	1214.0
50°	1432.2	1404.4	1285.4	1154.5	1087.0
52.5°	1317.2	1273.5	1158.5	1027.5	972.0
55°	1182.3	1146.6	1039.4	916.5	868.8
57.5°	1059.3	1023.6	924.4	809.3	769.7
60°	944.2	892.6	809.3	710.2	678.4
62.5°	817.3	777.6	706.2	622.9	662.5
65°	702.2	662.5	599.1	611.0	507.8
67.5°	575.3	555.4	499.9	444.3	428.5
70°	468.1	444.3	424.5	365.0	349.1
72.5°	372.9	349.1	321.4	289.6	277.7
75°	281.7	261.8	246.0	234.1	257.9
77.5°	194.4	186.5	174.6	162.7	158.7
80°	127.0	123.0	119.0	115.1	111.1
82.5°	75.4	75.4	75.4	75.4	75.4
85°	39.7	43.6	47.6	51.6	55.5
87.5°	23.8	23.8	27.8	31.7	35.7
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)