

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: P547025

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-93-86-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: P547025
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-LD4-3HI-40-UNV-93-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

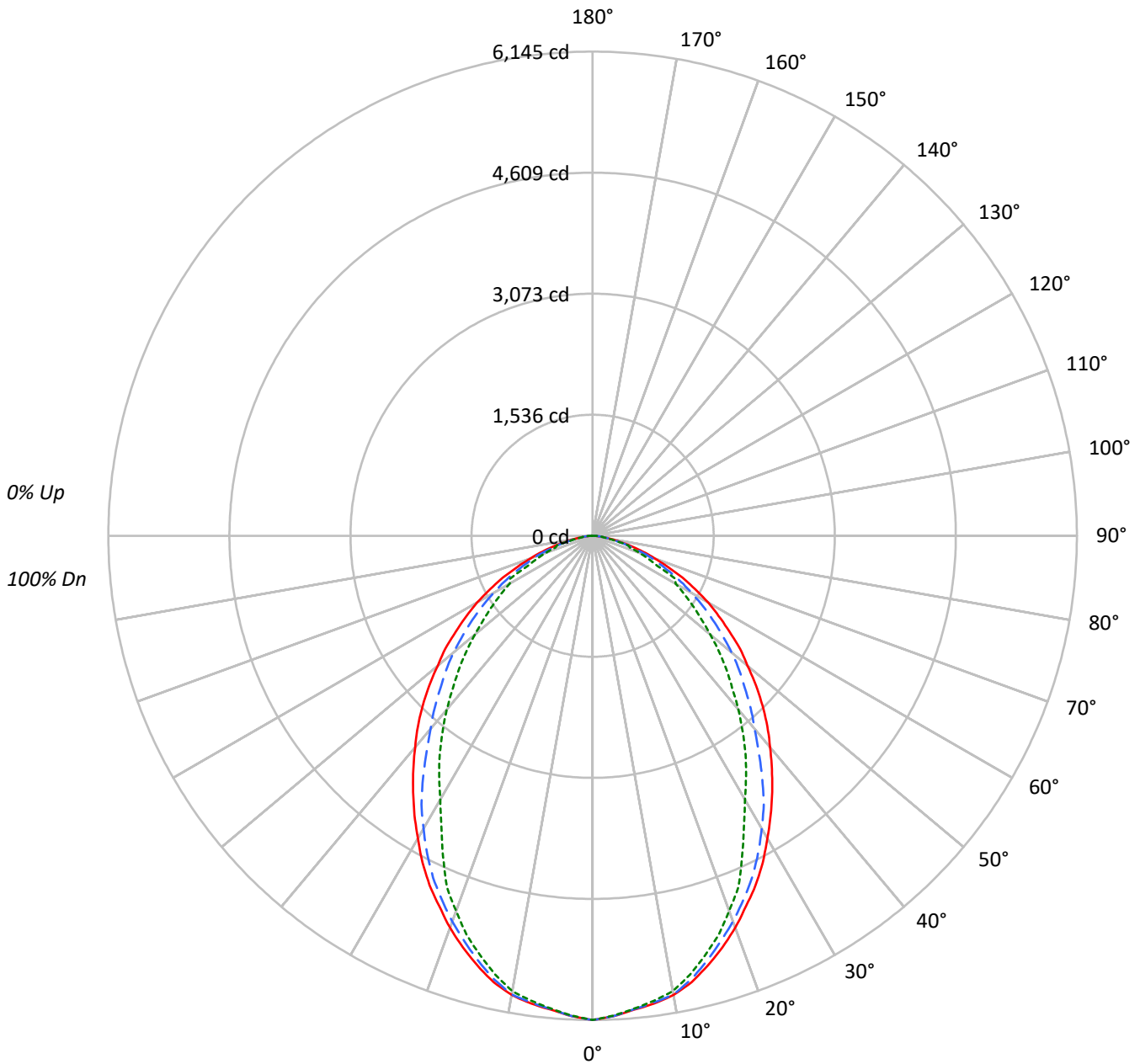
Lumens per Lamp: N/A
Luminaire Lumens: 12064.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	8268	8268	8268
5°	8156	8146	8137
10°	8085	8076	8017
15°	7867	7788	7679
20°	7578	7456	7253
25°	7267	7109	6666
30°	6887	6667	6004
35°	6523	6161	5555
40°	6152	5615	5054
45°	5799	5191	4569
50°	5368	4818	4075
55°	4966	4366	3650
60°	4550	3900	3269
65°	4004	3415	2895
70°	3298	2991	2460
75°	2622	2290	2401
80°	1761	1651	1541
85°	1096	1317	1536



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	572.0	4.7
10°-20°	1569.9	13.0
20°-30°	2173.4	18.0
30°-40°	2317.5	19.2
40°-50°	2114.3	17.5
50°-60°	1656.3	13.7
60°-70°	1079.5	8.9
70°-80°	478.3	4.0
80°-90°	102.7	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°	4315.4	35.8
0°-40°	6632.9	55.0
0°-60°	10403.5	86.2
0°-90°	12064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6145	6145	6145	6145	6145	
5°	6039	6032	6032	6024	6024	573
15°	5648	5648	5591	5534	5513	1588
25°	4895	4866	4788	4618	4490	2247
35°	3971	3943	3751	3467	3382	2483
45°	3048	2984	2728	2501	2401	2348
55°	2117	2053	1861	1641	1556	1899
65°	1258	1186	1073	1094	909	1239
75°	504	469	440	419	462	541
85°	71	78	85	92	100	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6145.2	6145.2	6145.2	6145.2	6145.2
2.5°	6102.6	6102.6	6102.6	6095.5	6095.5
5°	6038.7	6031.6	6031.6	6024.5	6024.5
7.5°	5988.9	5981.8	5974.7	5967.6	5953.4
10°	5917.9	5917.9	5910.8	5875.3	5868.2
12.5°	5804.2	5797.1	5768.7	5719.0	5704.8
15°	5647.9	5647.9	5591.1	5534.3	5513.0
17.5°	5477.4	5470.3	5399.3	5342.5	5314.0
20°	5292.7	5278.5	5207.5	5115.1	5065.4
22.5°	5086.7	5086.7	5001.4	4880.7	4830.9
25°	4894.9	4866.5	4788.3	4617.8	4489.9
27.5°	4674.6	4632.0	4546.8	4305.2	4156.0
30°	4433.1	4411.8	4291.0	3978.4	3864.8
32.5°	4205.8	4170.2	4042.4	3715.6	3623.2
35°	3971.3	3942.9	3751.1	3466.9	3381.7
37.5°	3736.9	3701.4	3459.8	3232.5	3125.9
40°	3502.4	3459.8	3196.9	2990.9	2877.3
42.5°	3282.2	3225.4	2969.6	2749.4	2621.5
45°	3047.8	2983.8	2728.1	2500.7	2401.3
47.5°	2813.3	2756.5	2522.0	2287.6	2173.9
50°	2564.7	2514.9	2301.8	2067.4	1946.6
52.5°	2358.6	2280.5	2074.5	1840.0	1740.6
55°	2117.1	2053.1	1861.3	1641.1	1555.8
57.5°	1896.9	1832.9	1655.3	1449.3	1378.2
60°	1690.8	1598.5	1449.3	1271.7	1214.8
62.5°	1463.5	1392.4	1264.6	1115.4	1186.4
65°	1257.5	1186.4	1072.8	1094.1	909.4
67.5°	1030.1	994.6	895.1	795.7	767.3
70°	838.3	795.7	760.2	653.6	625.2
72.5°	667.8	625.2	575.5	518.6	497.3
75°	504.4	468.9	440.5	419.2	461.8
77.5°	348.1	333.9	312.6	291.3	284.2
80°	227.3	220.2	213.1	206.0	198.9
82.5°	135.0	135.0	135.0	135.0	135.0
85°	71.0	78.1	85.3	92.4	99.5
87.5°	42.6	42.6	49.7	56.8	63.9
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)