

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: P546880

Luminaire Tested: **FMR-24-4-LD4-2STD-35-UNV-81-85-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: P546880
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-LD4-2STD-35-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

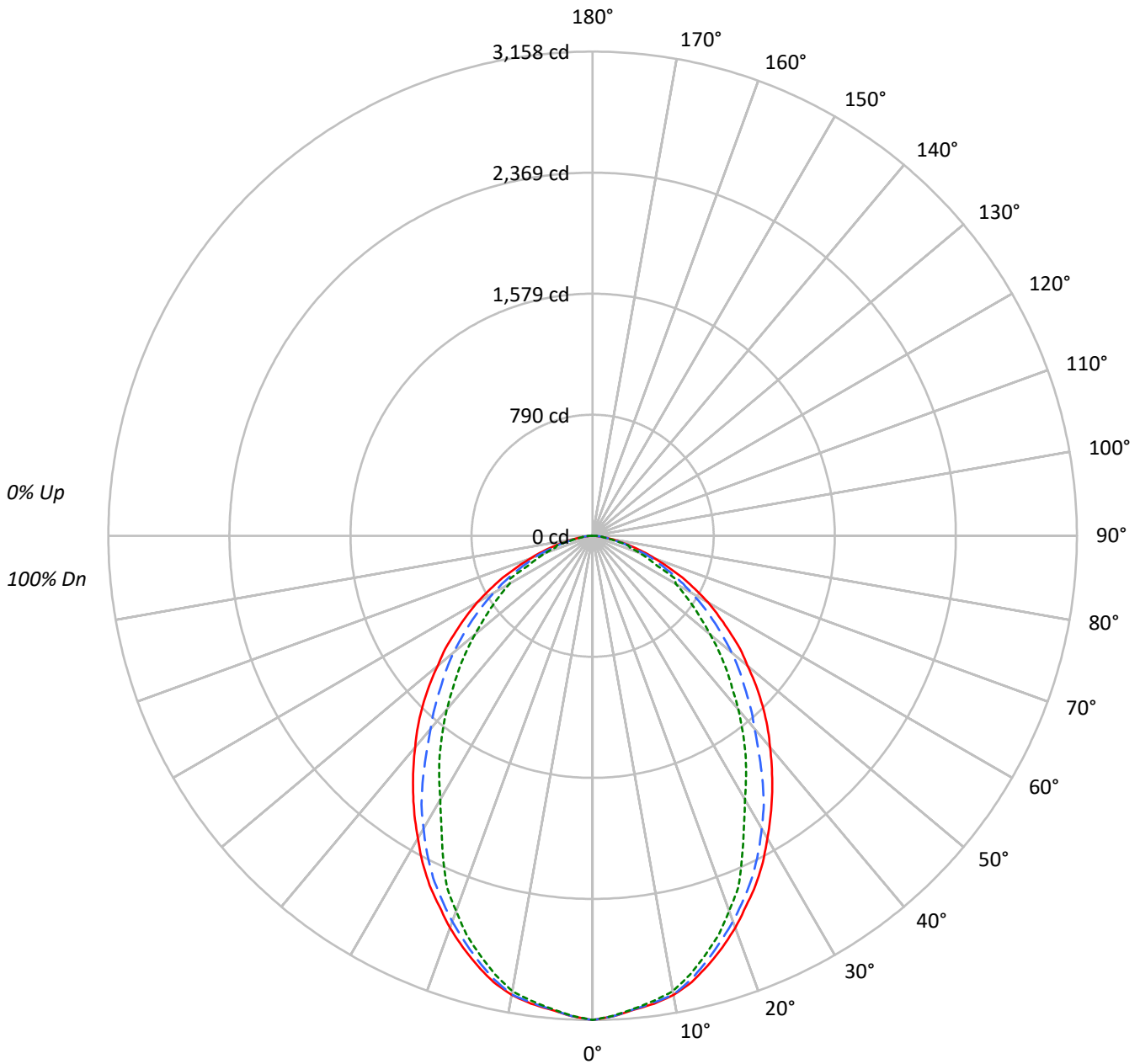
Lumens per Lamp: N/A
Luminaire Lumens: 6200.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4249	4249	4249
5°	4192	4187	4182
10°	4155	4150	4120
15°	4043	4003	3947
20°	3895	3832	3727
25°	3735	3653	3426
30°	3540	3426	3086
35°	3352	3166	2855
40°	3162	2886	2597
45°	2980	2668	2348
50°	2759	2476	2094
55°	2552	2244	1876
60°	2338	2004	1680
65°	2057	1755	1488
70°	1695	1537	1264
75°	1347	1177	1234
80°	905	848	792
85°	563	676	789



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.0	4.7
10°-20°	806.8	13.0
20°-30°	1117.0	18.0
30°-40°	1191.0	19.2
40°-50°	1086.6	17.5
50°-60°	851.2	13.7
60°-70°	554.8	8.9
70°-80°	245.8	4.0
80°-90°	52.8	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°	2217.8	35.8
0°-40°	3408.8	55.0
0°-60°	5346.6	86.2
0°-90°	6200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3158	3158	3158	3158	3158	
5°	3103	3100	3100	3096	3096	295
15°	2903	2903	2873	2844	2833	816
25°	2516	2501	2461	2373	2308	1155
35°	2041	2026	1928	1782	1738	1276
45°	1566	1534	1402	1285	1234	1207
55°	1088	1055	957	843	800	976
65°	646	610	551	562	467	637
75°	259	241	226	215	237	278
85°	36	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3158.2	3158.2	3158.2	3158.2	3158.2
2.5°	3136.3	3136.3	3136.3	3132.6	3132.6
5°	3103.4	3099.8	3099.8	3096.1	3096.1
7.5°	3077.9	3074.2	3070.6	3066.9	3059.6
10°	3041.4	3041.4	3037.7	3019.5	3015.8
12.5°	2982.9	2979.3	2964.7	2939.1	2931.8
15°	2902.6	2902.6	2873.4	2844.2	2833.2
17.5°	2815.0	2811.3	2774.8	2745.6	2731.0
20°	2720.1	2712.8	2676.3	2628.8	2603.2
22.5°	2614.2	2614.2	2570.4	2508.3	2482.7
25°	2515.6	2501.0	2460.8	2373.2	2307.5
27.5°	2402.4	2380.5	2336.7	2212.6	2135.9
30°	2278.3	2267.3	2205.3	2044.6	1986.2
32.5°	2161.4	2143.2	2077.5	1909.5	1862.1
35°	2041.0	2026.4	1927.8	1781.7	1737.9
37.5°	1920.5	1902.2	1778.1	1661.2	1606.5
40°	1800.0	1778.1	1643.0	1537.1	1478.7
42.5°	1686.8	1657.6	1526.2	1413.0	1347.3
45°	1566.3	1533.5	1402.0	1285.2	1234.1
47.5°	1445.8	1416.6	1296.1	1175.7	1117.2
50°	1318.0	1292.5	1183.0	1062.5	1000.4
52.5°	1212.2	1172.0	1066.1	945.6	894.5
55°	1088.0	1055.2	956.6	843.4	799.6
57.5°	974.8	942.0	850.7	744.8	708.3
60°	869.0	821.5	744.8	653.5	624.3
62.5°	752.1	715.6	649.9	573.2	609.7
65°	646.2	609.7	551.3	562.3	467.3
67.5°	529.4	511.2	460.0	408.9	394.3
70°	430.8	408.9	390.7	335.9	321.3
72.5°	343.2	321.3	295.7	266.5	255.6
75°	259.2	241.0	226.4	215.4	237.3
77.5°	178.9	171.6	160.6	149.7	146.0
80°	116.8	113.2	109.5	105.9	102.2
82.5°	69.4	69.4	69.4	69.4	69.4
85°	36.5	40.2	43.8	47.5	51.1
87.5°	21.9	21.9	25.6	29.2	32.9
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)