

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: P546950

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-81-97-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: P546950
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-50-UNV-81-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

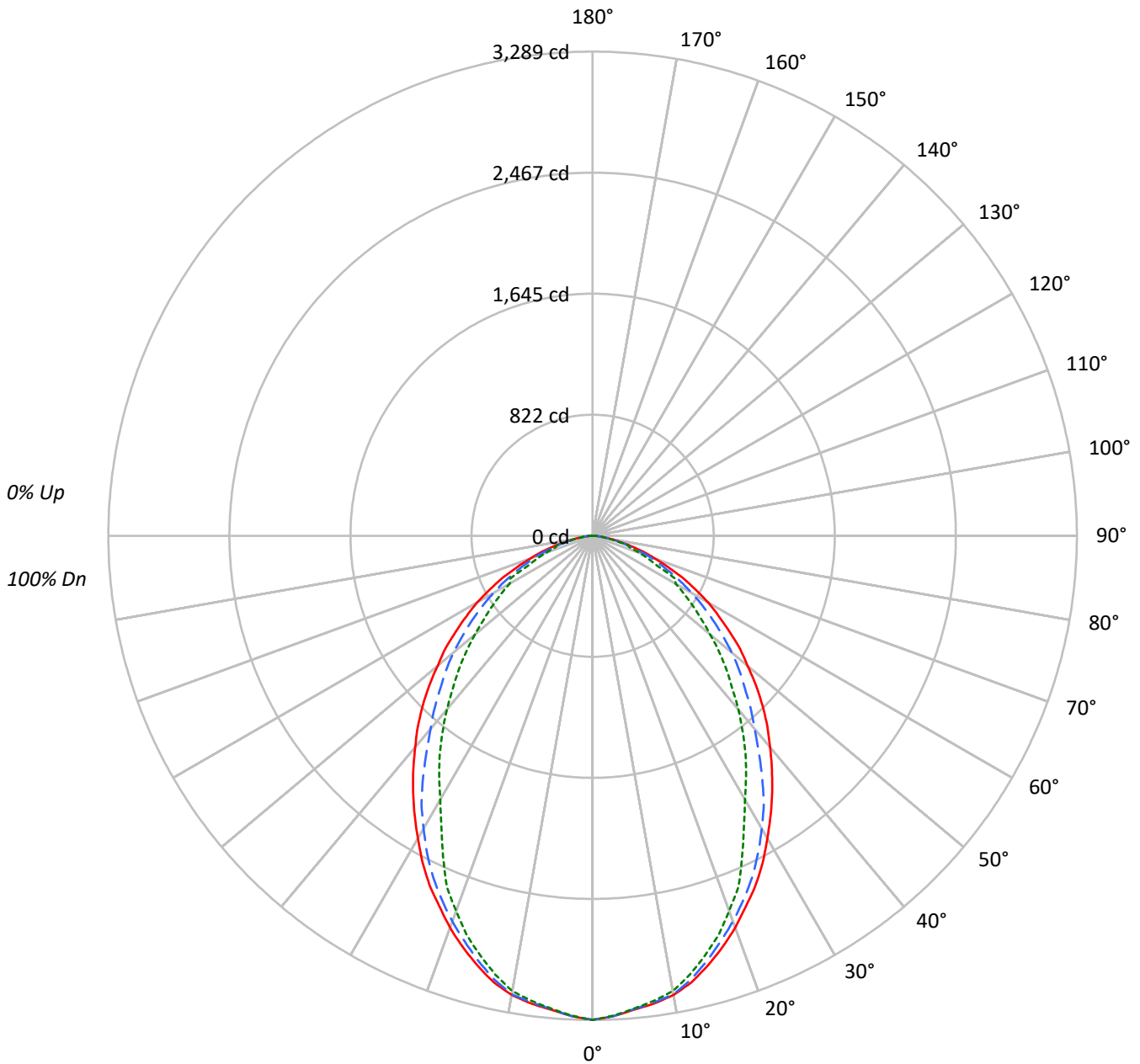
Lumens per Lamp: N/A
Luminaire Lumens: 6456.0 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	4425	4425	4425
5°	4365	4360	4354
10°	4327	4322	4290
15°	4210	4168	4109
20°	4056	3990	3881
25°	3889	3804	3567
30°	3686	3568	3213
35°	3491	3297	2973
40°	3292	3005	2704
45°	3103	2778	2445
50°	2873	2578	2180
55°	2658	2337	1953
60°	2435	2087	1749
65°	2142	1828	1549
70°	1765	1600	1316
75°	1403	1225	1285
80°	943	884	825
85°	587	704	821



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.1	4.7
10°-20°	840.1	13.0
20°-30°	1163.1	18.0
30°-40°	1240.2	19.2
40°-50°	1131.4	17.5
50°-60°	886.4	13.7
60°-70°	577.7	8.9
70°-80°	256.0	4.0
80°-90°	54.9	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°	2309.4	35.8
0°-40°	3549.6	55.0
0°-60°	5567.4	86.2
0°-90°	6456.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6456.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3289	3289	3289	3289	3289	
5°	3232	3228	3228	3224	3224	307
15°	3022	3022	2992	2962	2950	850
25°	2620	2604	2562	2471	2403	1203
35°	2125	2110	2007	1855	1810	1329
45°	1631	1597	1460	1338	1285	1256
55°	1133	1099	996	878	833	1016
65°	673	635	574	586	487	663
75°	270	251	236	224	247	289
85°	38	42	46	49	53	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3288.6	3288.6	3288.6	3288.6	3288.6
2.5°	3265.8	3265.8	3265.8	3262.0	3262.0
5°	3231.6	3227.8	3227.8	3224.0	3224.0
7.5°	3205.0	3201.2	3197.4	3193.6	3186.0
10°	3166.9	3166.9	3163.1	3144.1	3140.3
12.5°	3106.1	3102.3	3087.1	3060.5	3052.9
15°	3022.5	3022.5	2992.1	2961.6	2950.2
17.5°	2931.2	2927.4	2889.4	2859.0	2843.8
20°	2832.4	2824.8	2786.8	2737.3	2710.7
22.5°	2722.1	2722.1	2676.5	2611.9	2585.3
25°	2619.5	2604.3	2562.4	2471.2	2402.8
27.5°	2501.6	2478.8	2433.2	2303.9	2224.1
30°	2372.4	2360.9	2296.3	2129.0	2068.2
32.5°	2250.7	2231.7	2163.3	1988.4	1938.9
35°	2125.2	2110.0	2007.4	1855.3	1809.7
37.5°	1999.8	1980.8	1851.5	1729.8	1672.8
40°	1874.3	1851.5	1710.8	1600.6	1539.7
42.5°	1756.5	1726.0	1589.2	1471.3	1402.9
45°	1631.0	1596.8	1459.9	1338.3	1285.0
47.5°	1505.5	1475.1	1349.7	1224.2	1163.4
50°	1372.5	1345.9	1231.8	1106.3	1041.7
52.5°	1262.2	1220.4	1110.1	984.7	931.5
55°	1133.0	1098.7	996.1	878.2	832.6
57.5°	1015.1	980.9	885.8	775.6	737.6
60°	904.8	855.4	775.6	680.5	650.1
62.5°	783.2	745.2	676.7	596.9	634.9
65°	672.9	634.9	574.1	585.5	486.6
67.5°	551.3	532.3	479.0	425.8	410.6
70°	448.6	425.8	406.8	349.8	334.6
72.5°	357.4	334.6	307.9	277.5	266.1
75°	269.9	250.9	235.7	224.3	247.1
77.5°	186.3	178.7	167.3	155.9	152.1
80°	121.7	117.9	114.1	110.3	106.5
82.5°	72.2	72.2	72.2	72.2	72.2
85°	38.0	41.8	45.6	49.4	53.2
87.5°	22.8	22.8	26.6	30.4	34.2
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)