

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: P546918

Luminaire Tested: **FMR-24-4-LD4-2STD-40-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: P546918
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

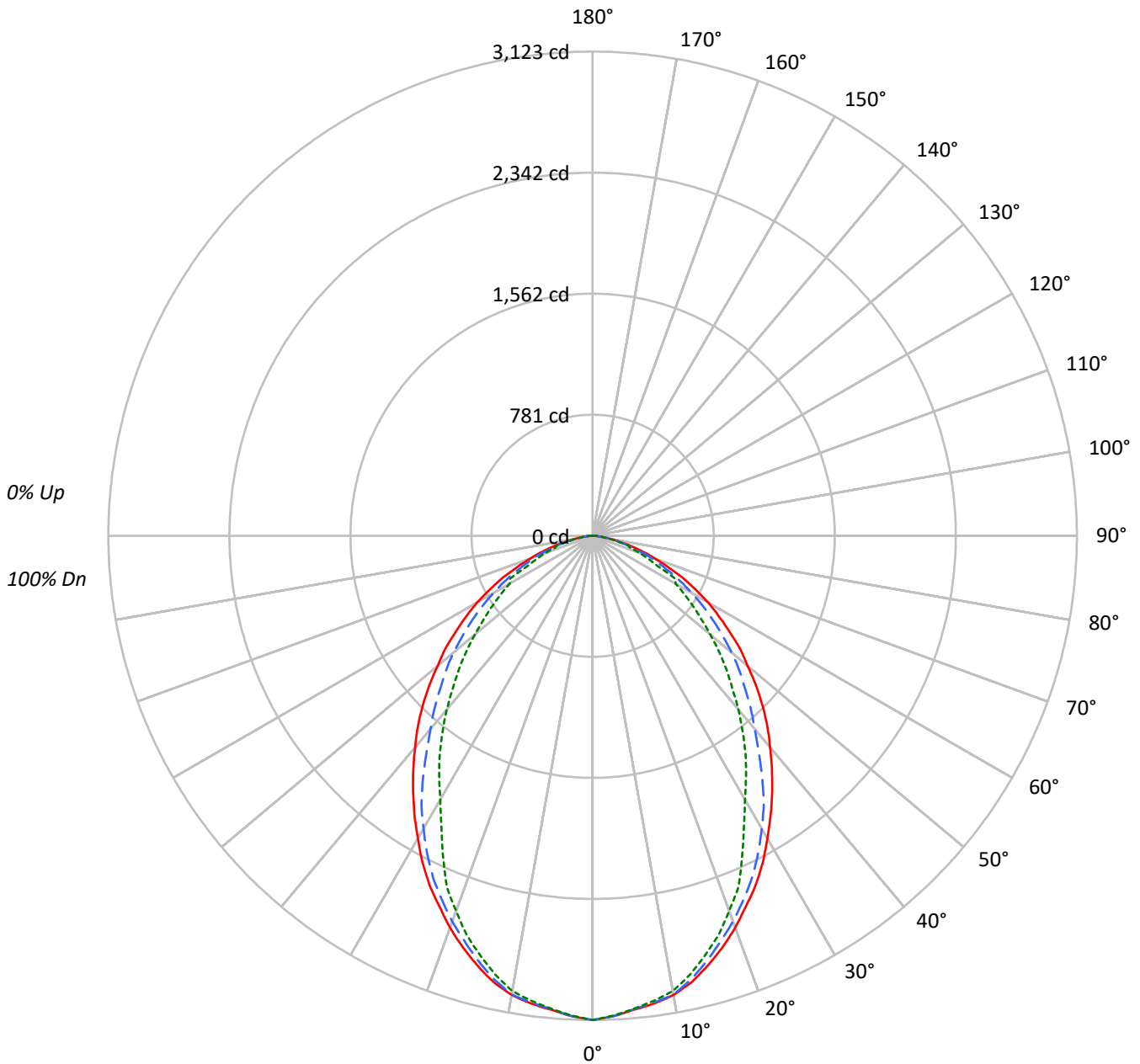
Lumens per Lamp: N/A
Luminaire Lumens: 6131.0 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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					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°	4202	4202	4202
5°	4145	4140	4135
10°	4109	4104	4074
15°	3998	3958	3903
20°	3851	3789	3686
25°	3693	3613	3388
30°	3500	3388	3051
35°	3315	3131	2823
40°	3126	2854	2568
45°	2947	2638	2322
50°	2728	2449	2071
55°	2524	2219	1855
60°	2312	1982	1661
65°	2035	1736	1471
70°	1676	1520	1250
75°	1332	1163	1220
80°	895	839	783
85°	557	668	780



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.7	4.7
10°-20°	797.8	13.0
20°-30°	1104.6	18.0
30°-40°	1177.8	19.2
40°-50°	1074.5	17.5
50°-60°	841.8	13.7
60°-70°	548.6	8.9
70°-80°	243.1	4.0
80°-90°	52.2	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°	2193.1	35.8
0°-40°	3370.9	55.0
0°-60°	5287.1	86.2
0°-90°	6131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6131.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3123	3123	3123	3123	3123	
5°	3069	3065	3065	3062	3062	291
15°	2870	2870	2841	2812	2802	807
25°	2488	2473	2434	2347	2282	1142
35°	2018	2004	1906	1762	1719	1262
45°	1549	1516	1386	1271	1220	1193
55°	1076	1043	946	834	791	965
65°	639	603	545	556	462	630
75°	256	238	224	213	235	275
85°	36	40	43	47	50	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3123.0	3123.0	3123.0	3123.0	3123.0
2.5°	3101.4	3101.4	3101.4	3097.8	3097.8
5°	3068.9	3065.3	3065.3	3061.7	3061.7
7.5°	3043.6	3040.0	3036.4	3032.8	3025.6
10°	3007.5	3007.5	3003.9	2985.9	2982.2
12.5°	2949.7	2946.1	2931.7	2906.4	2899.2
15°	2870.3	2870.3	2841.4	2812.5	2801.7
17.5°	2783.7	2780.1	2744.0	2715.1	2700.6
20°	2689.8	2682.6	2646.5	2599.5	2574.3
22.5°	2585.1	2585.1	2541.8	2480.4	2455.1
25°	2487.6	2473.2	2433.5	2346.8	2281.8
27.5°	2375.7	2354.0	2310.7	2187.9	2112.1
30°	2252.9	2242.1	2180.7	2021.9	1964.1
32.5°	2137.4	2119.3	2054.4	1888.3	1841.3
35°	2018.2	2003.8	1906.3	1761.9	1718.6
37.5°	1899.1	1881.1	1758.3	1642.8	1588.6
40°	1780.0	1758.3	1624.7	1520.0	1462.2
42.5°	1668.0	1639.1	1509.2	1397.2	1332.3
45°	1548.9	1516.4	1386.4	1270.9	1220.3
47.5°	1429.7	1400.9	1281.7	1162.6	1104.8
50°	1303.4	1278.1	1169.8	1050.6	989.3
52.5°	1198.7	1159.0	1054.3	935.1	884.6
55°	1075.9	1043.4	945.9	834.0	790.7
57.5°	964.0	931.5	841.2	736.5	700.4
60°	859.3	812.4	736.5	646.3	617.4
62.5°	743.8	707.7	642.7	566.8	602.9
65°	639.1	602.9	545.2	556.0	462.1
67.5°	523.5	505.5	454.9	404.4	389.9
70°	426.0	404.4	386.3	332.2	317.7
72.5°	339.4	317.7	292.4	263.6	252.7
75°	256.3	238.3	223.8	213.0	234.7
77.5°	176.9	169.7	158.9	148.0	144.4
80°	115.5	111.9	108.3	104.7	101.1
82.5°	68.6	68.6	68.6	68.6	68.6
85°	36.1	39.7	43.3	46.9	50.5
87.5°	21.7	21.7	25.3	28.9	32.5
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)