

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: P546956

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-82-94-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: P546956
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-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

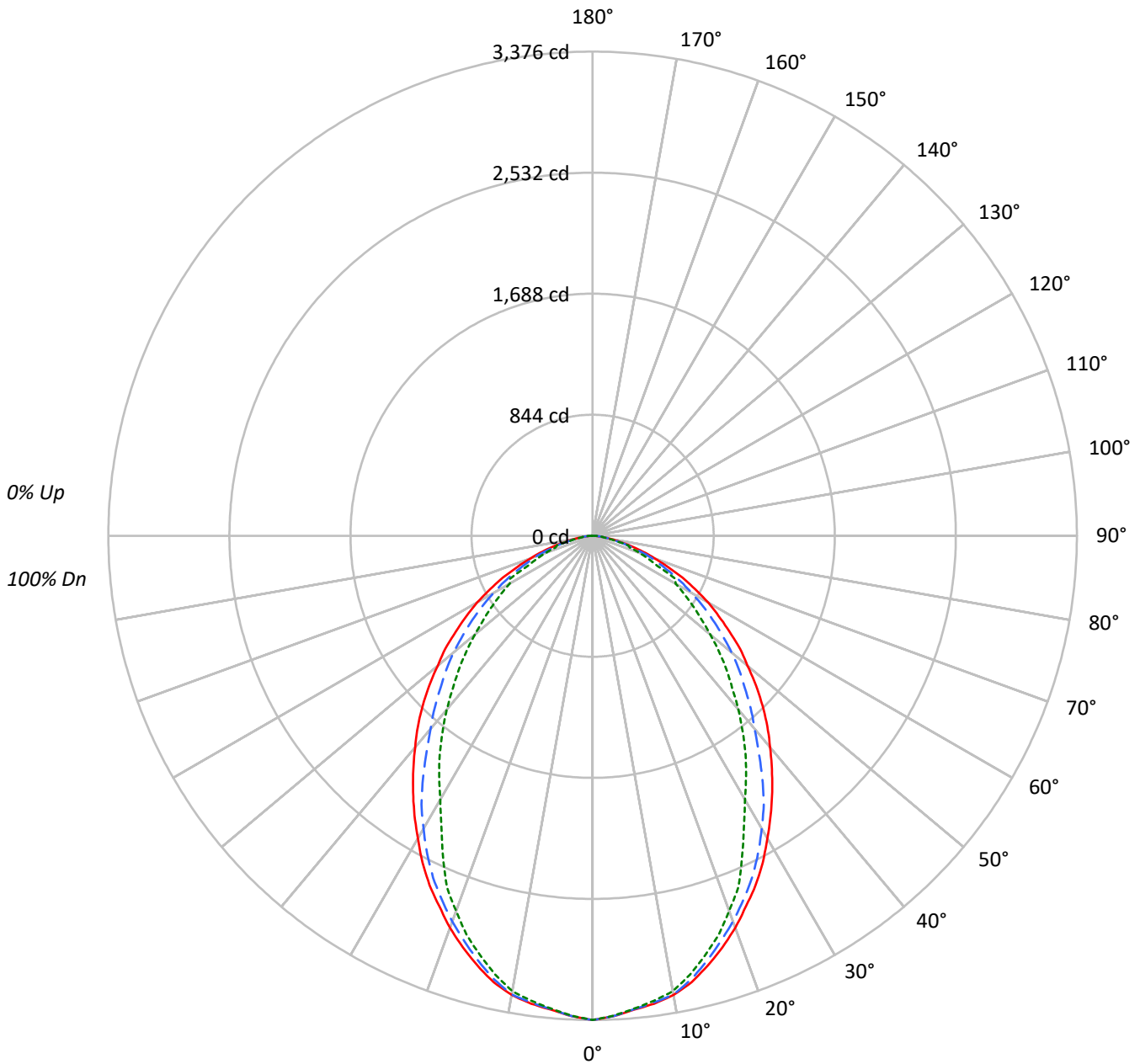
Lumens per Lamp: N/A
Luminaire Lumens: 6628.0 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4543	4543	4543
5°	4481	4476	4470
10°	4442	4437	4405
15°	4322	4279	4219
20°	4164	4096	3985
25°	3992	3905	3662
30°	3784	3663	3299
35°	3584	3385	3052
40°	3380	3085	2777
45°	3186	2852	2510
50°	2949	2647	2239
55°	2728	2399	2005
60°	2500	2143	1796
65°	2200	1876	1591
70°	1812	1643	1351
75°	1441	1258	1319
80°	968	907	847
85°	602	722	843



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.3	4.7
10°-20°	862.5	13.0
20°-30°	1194.1	18.0
30°-40°	1273.2	19.2
40°-50°	1161.6	17.5
50°-60°	910.0	13.7
60°-70°	593.1	8.9
70°-80°	262.8	4.0
80°-90°	56.4	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°	2370.9	35.8
0°-40°	3644.1	55.0
0°-60°	5715.7	86.2
0°-90°	6628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6628.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3376	3376	3376	3376	3376	
5°	3318	3314	3314	3310	3310	315
15°	3103	3103	3072	3040	3029	872
25°	2689	2674	2631	2537	2467	1235
35°	2182	2166	2061	1905	1858	1364
45°	1674	1639	1499	1374	1319	1290
55°	1163	1128	1023	902	855	1043
65°	691	652	589	601	500	681
75°	277	258	242	230	254	297
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3376.2	3376.2	3376.2	3376.2	3376.2
2.5°	3352.8	3352.8	3352.8	3348.9	3348.9
5°	3317.7	3313.8	3313.8	3309.9	3309.9
7.5°	3290.3	3286.4	3282.5	3278.6	3270.8
10°	3251.3	3251.3	3247.4	3227.9	3224.0
12.5°	3188.9	3185.0	3169.3	3142.0	3134.2
15°	3103.0	3103.0	3071.8	3040.5	3028.8
17.5°	3009.3	3005.4	2966.4	2935.2	2919.5
20°	2907.8	2900.0	2861.0	2810.3	2782.9
22.5°	2794.6	2794.6	2747.8	2681.5	2654.1
25°	2689.3	2673.6	2630.7	2537.0	2466.8
27.5°	2568.3	2544.8	2498.0	2365.3	2283.3
30°	2435.6	2423.8	2357.5	2185.8	2123.3
32.5°	2310.7	2291.1	2220.9	2041.3	1990.6
35°	2181.9	2166.2	2060.9	1904.7	1857.9
37.5°	2053.1	2033.5	1900.8	1775.9	1717.4
40°	1924.2	1900.8	1756.4	1643.2	1580.8
42.5°	1803.2	1772.0	1631.5	1510.5	1440.3
45°	1674.4	1639.3	1498.8	1373.9	1319.3
47.5°	1545.6	1514.4	1385.6	1256.8	1194.4
50°	1409.0	1381.7	1264.6	1135.8	1069.5
52.5°	1295.8	1252.9	1139.7	1010.9	956.3
55°	1163.1	1128.0	1022.6	901.6	854.8
57.5°	1042.1	1007.0	909.4	796.2	757.2
60°	928.9	878.2	796.2	698.7	667.4
62.5°	804.0	765.0	694.8	612.8	651.8
65°	690.9	651.8	589.4	601.1	499.6
67.5°	566.0	546.4	491.8	437.2	421.5
70°	460.6	437.2	417.6	359.1	343.5
72.5°	366.9	343.5	316.2	284.9	273.2
75°	277.1	257.6	242.0	230.3	253.7
77.5°	191.3	183.4	171.7	160.0	156.1
80°	124.9	121.0	117.1	113.2	109.3
82.5°	74.2	74.2	74.2	74.2	74.2
85°	39.0	42.9	46.8	50.7	54.6
87.5°	23.4	23.4	27.3	31.2	35.1
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)