

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: P547094

Luminaire Tested: **FMR-24-4-LD4-3LO-35-UNV-93-97-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: P547094
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-LD4-3LO-35-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

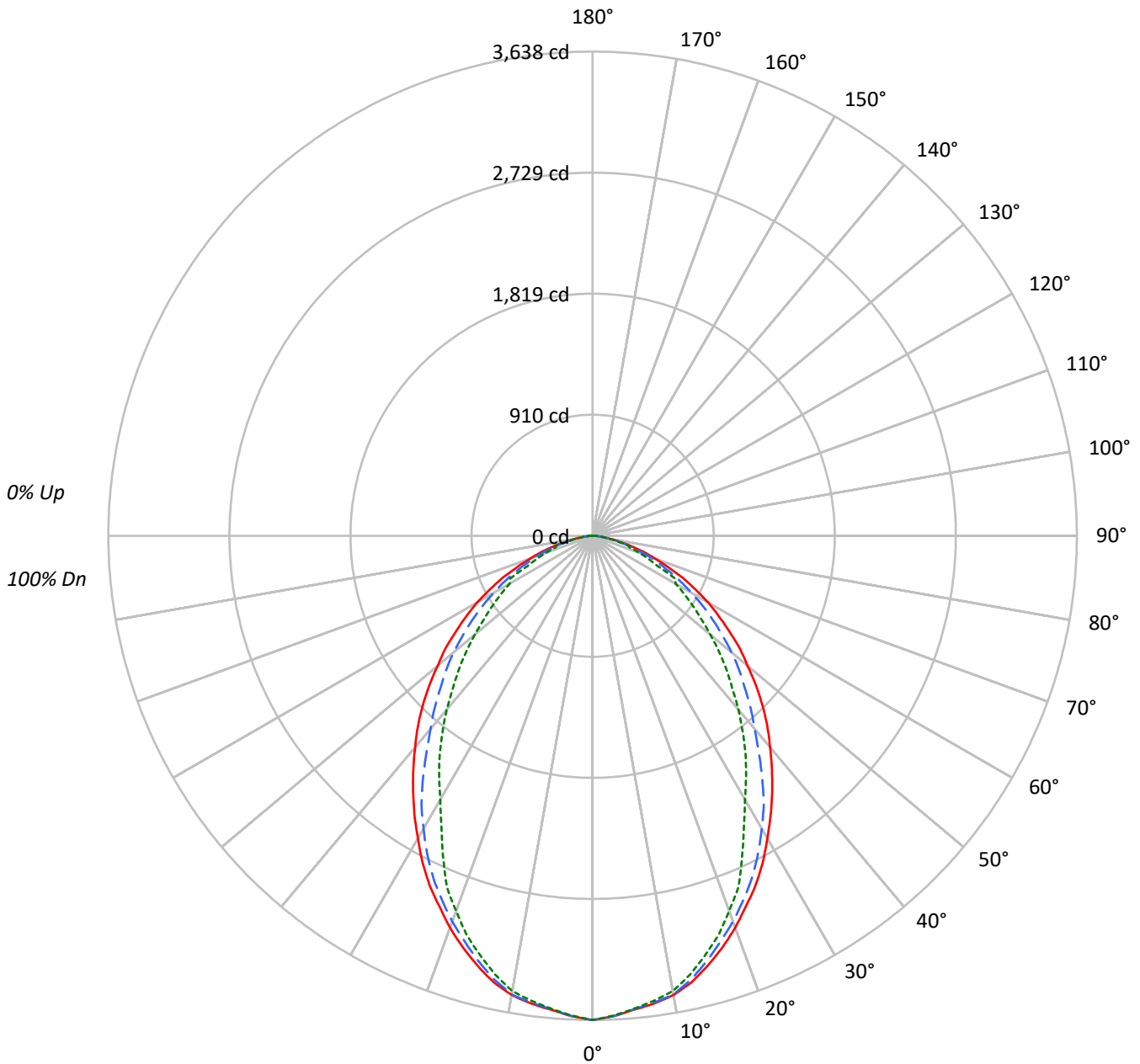
Lumens per Lamp: N/A
Luminaire Lumens: 7142.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	4895	4895	4895
5°	4828	4823	4817
10°	4787	4781	4746
15°	4657	4611	4546
20°	4486	4414	4294
25°	4302	4208	3946
30°	4077	3947	3555
35°	3862	3648	3288
40°	3642	3324	2992
45°	3433	3073	2705
50°	3178	2852	2412
55°	2940	2585	2161
60°	2694	2309	1935
65°	2370	2022	1714
70°	1952	1770	1456
75°	1552	1356	1421
80°	1043	978	913
85°	650	780	909



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.7	4.7
10°-20°	929.4	13.0
20°-30°	1286.7	18.0
30°-40°	1372.0	19.2
40°-50°	1251.7	17.5
50°-60°	980.6	13.7
60°-70°	639.1	8.9
70°-80°	283.1	4.0
80°-90°	60.8	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°	2554.8	35.8
0°-40°	3926.7	55.0
0°-60°	6159.0	86.2
0°-90°	7142.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7142.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3638	3638	3638	3638	3638	
5°	3575	3571	3571	3566	3566	339
15°	3344	3344	3310	3276	3264	940
25°	2898	2881	2835	2734	2658	1330
35°	2351	2334	2221	2052	2002	1470
45°	1804	1766	1615	1480	1422	1390
55°	1253	1216	1102	972	921	1124
65°	744	702	635	648	538	734
75°	299	278	261	248	273	320
85°	42	46	50	55	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3638.0	3638.0	3638.0	3638.0	3638.0
2.5°	3612.8	3612.8	3612.8	3608.6	3608.6
5°	3575.0	3570.7	3570.7	3566.5	3566.5
7.5°	3545.5	3541.3	3537.1	3532.9	3524.5
10°	3503.5	3503.5	3499.2	3478.2	3474.0
12.5°	3436.2	3432.0	3415.1	3385.7	3377.3
15°	3343.6	3343.6	3310.0	3276.3	3263.7
17.5°	3242.7	3238.5	3196.4	3162.8	3146.0
20°	3133.3	3124.9	3082.9	3028.2	2998.8
22.5°	3011.4	3011.4	2960.9	2889.4	2860.0
25°	2897.8	2881.0	2834.7	2733.8	2658.1
27.5°	2767.4	2742.2	2691.7	2548.7	2460.4
30°	2624.4	2611.8	2540.3	2355.3	2288.0
32.5°	2489.8	2468.8	2393.1	2199.6	2145.0
35°	2351.1	2334.2	2220.7	2052.4	2002.0
37.5°	2212.3	2191.2	2048.2	1913.7	1850.6
40°	2073.5	2048.2	1892.6	1770.7	1703.4
42.5°	1943.1	1909.4	1758.0	1627.7	1551.9
45°	1804.3	1766.4	1615.0	1480.5	1421.6
47.5°	1665.5	1631.9	1493.1	1354.3	1287.0
50°	1518.3	1488.9	1362.7	1223.9	1152.4
52.5°	1396.3	1350.1	1228.1	1089.3	1030.4
55°	1253.3	1215.5	1101.9	971.5	921.1
57.5°	1123.0	1085.1	980.0	858.0	815.9
60°	1001.0	946.3	858.0	752.8	719.2
62.5°	866.4	824.3	748.6	660.3	702.4
65°	744.4	702.4	635.1	647.7	538.3
67.5°	609.8	588.8	529.9	471.1	454.2
70°	496.3	471.1	450.0	386.9	370.1
72.5°	395.3	370.1	340.7	307.0	294.4
75°	298.6	277.6	260.8	248.1	273.4
77.5°	206.1	197.7	185.1	172.4	168.2
80°	134.6	130.4	126.2	122.0	117.8
82.5°	79.9	79.9	79.9	79.9	79.9
85°	42.1	46.3	50.5	54.7	58.9
87.5°	25.2	25.2	29.4	33.6	37.9
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)