

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: P547154

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-93-87-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: P547154
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-50-UNV-93-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

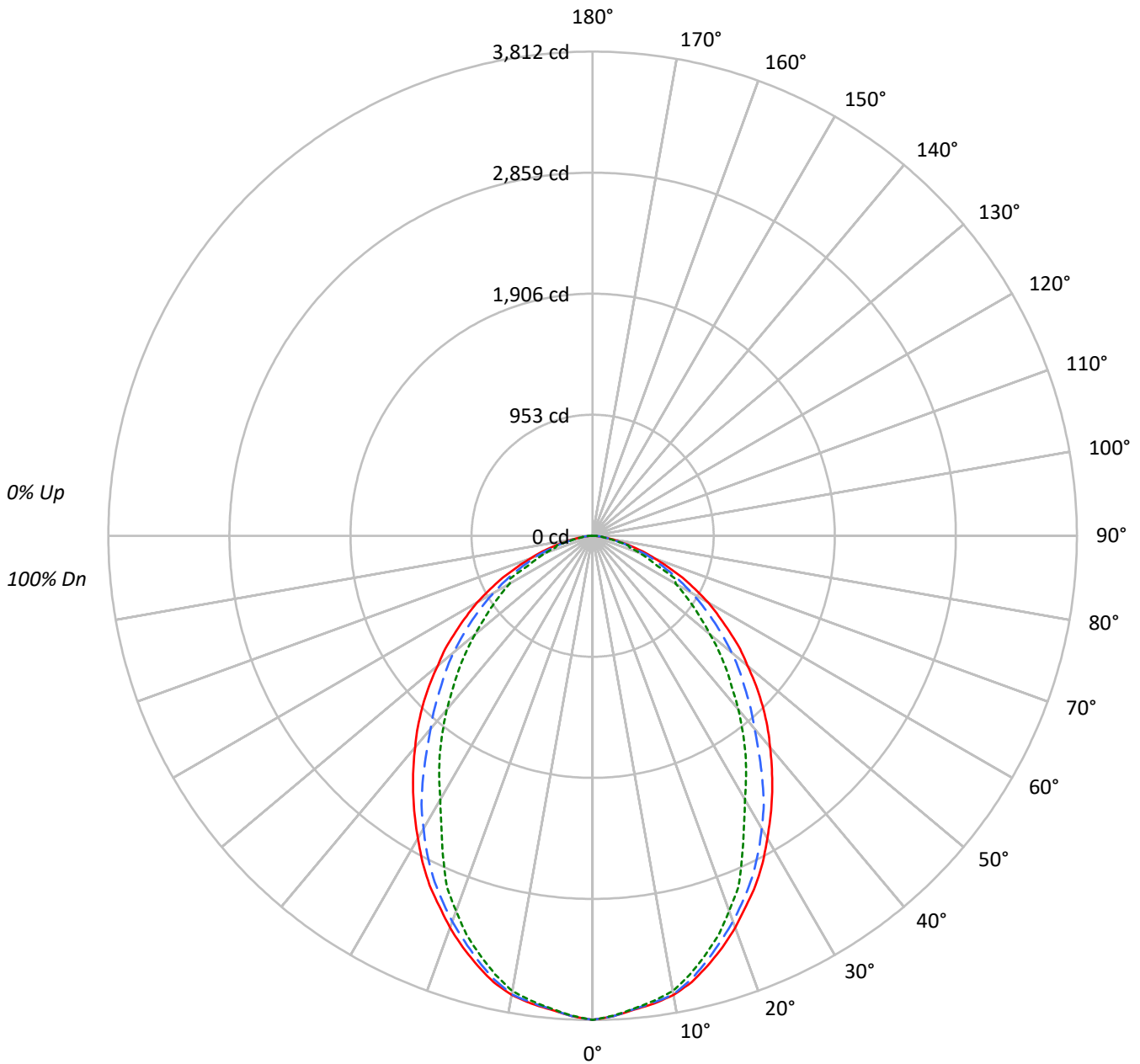
Lumens per Lamp: N/A
Luminaire Lumens: 7483.0 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (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°	5129	5129	5129
5°	5059	5053	5047
10°	5015	5009	4973
15°	4880	4831	4763
20°	4701	4625	4499
25°	4507	4409	4135
30°	4272	4135	3724
35°	4046	3822	3445
40°	3816	3483	3135
45°	3597	3220	2834
50°	3330	2989	2527
55°	3080	2708	2264
60°	2822	2419	2028
65°	2483	2118	1796
70°	2046	1855	1526
75°	1627	1420	1489
80°	1093	1024	956
85°	681	817	953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.8	4.7
10°-20°	973.8	13.0
20°-30°	1348.1	18.0
30°-40°	1437.5	19.2
40°-50°	1311.4	17.5
50°-60°	1027.4	13.7
60°-70°	669.6	8.9
70°-80°	296.7	4.0
80°-90°	63.7	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°	2676.7	35.8
0°-40°	4114.2	55.0
0°-60°	6453.0	86.2
0°-90°	7483.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7483.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3812	3812	3812	3812	3812	
5°	3746	3741	3741	3737	3737	356
15°	3503	3503	3468	3433	3420	985
25°	3036	3018	2970	2864	2785	1394
35°	2463	2446	2327	2150	2098	1540
45°	1890	1851	1692	1551	1489	1456
55°	1313	1274	1154	1018	965	1178
65°	780	736	665	679	564	769
75°	313	291	273	260	286	335
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3811.7	3811.7	3811.7	3811.7	3811.7
2.5°	3785.3	3785.3	3785.3	3780.9	3780.9
5°	3745.6	3741.2	3741.2	3736.8	3736.8
7.5°	3714.8	3710.4	3706.0	3701.6	3692.8
10°	3670.7	3670.7	3666.3	3644.3	3639.9
12.5°	3600.2	3595.8	3578.2	3547.3	3538.5
15°	3503.3	3503.3	3468.0	3432.8	3419.5
17.5°	3397.5	3393.1	3349.0	3313.8	3296.2
20°	3282.9	3274.1	3230.1	3172.8	3141.9
22.5°	3155.2	3155.2	3102.3	3027.4	2996.5
25°	3036.2	3018.5	2970.1	2864.3	2785.0
27.5°	2899.6	2873.1	2820.2	2670.4	2577.9
30°	2749.7	2736.5	2661.6	2467.7	2397.2
32.5°	2608.7	2586.7	2507.4	2304.7	2247.4
35°	2463.3	2445.7	2326.7	2150.4	2097.6
37.5°	2317.9	2295.9	2146.0	2005.0	1938.9
40°	2172.5	2146.0	1983.0	1855.2	1784.7
42.5°	2035.9	2000.6	1842.0	1705.4	1626.0
45°	1890.4	1850.8	1692.1	1551.1	1489.4
47.5°	1745.0	1709.8	1564.4	1418.9	1348.4
50°	1590.8	1559.9	1427.8	1282.3	1207.4
52.5°	1463.0	1414.5	1286.7	1141.3	1079.6
55°	1313.2	1273.5	1154.5	1017.9	965.1
57.5°	1176.6	1136.9	1026.7	899.0	854.9
60°	1048.8	991.5	899.0	788.8	753.5
62.5°	907.8	863.7	784.4	691.8	735.9
65°	780.0	735.9	665.4	678.6	564.0
67.5°	639.0	616.9	555.2	493.5	475.9
70°	520.0	493.5	471.5	405.4	387.8
72.5°	414.2	387.8	356.9	321.7	308.5
75°	312.9	290.8	273.2	260.0	286.4
77.5°	215.9	207.1	193.9	180.7	176.3
80°	141.0	136.6	132.2	127.8	123.4
82.5°	83.7	83.7	83.7	83.7	83.7
85°	44.1	48.5	52.9	57.3	61.7
87.5°	26.4	26.4	30.8	35.3	39.7
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)