

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: P546902

Luminaire Tested: **FMR-24-4-LD4-2STD-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: P546902
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-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

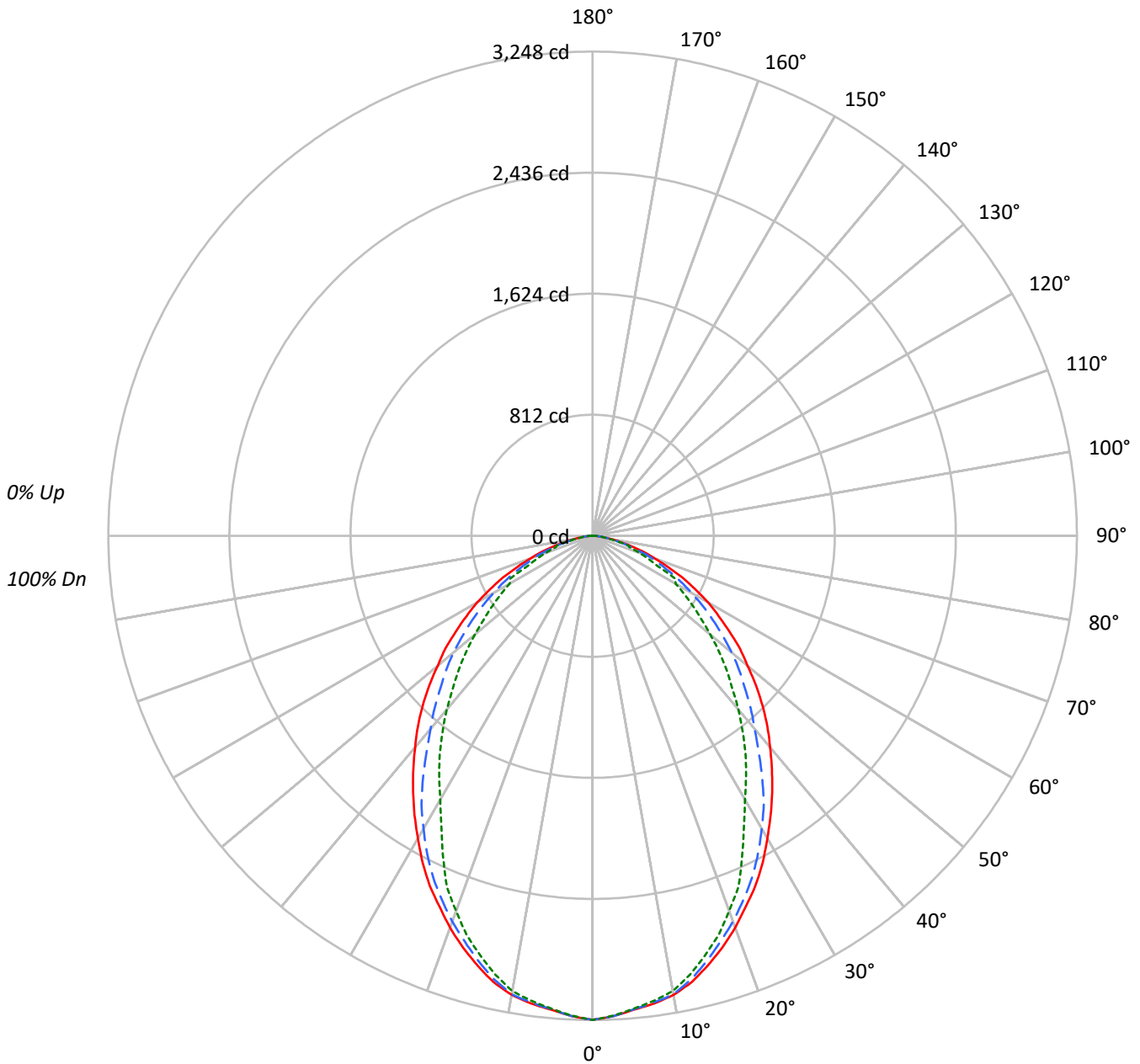
Lumens per Lamp: N/A
Luminaire Lumens: 6376.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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					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								
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°	4370	4370	4370
5°	4311	4306	4300
10°	4273	4268	4237
15°	4158	4116	4059
20°	4005	3941	3833
25°	3841	3757	3523
30°	3640	3523	3173
35°	3448	3256	2936
40°	3251	2968	2671
45°	3065	2743	2415
50°	2837	2546	2153
55°	2625	2308	1929
60°	2405	2061	1728
65°	2116	1805	1530
70°	1743	1581	1300
75°	1386	1210	1269
80°	931	872	814
85°	579	696	812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.3	4.7
10°-20°	829.7	13.0
20°-30°	1148.7	18.0
30°-40°	1224.8	19.2
40°-50°	1117.4	17.5
50°-60°	875.4	13.7
60°-70°	570.5	8.9
70°-80°	252.8	4.0
80°-90°	54.3	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°	2280.7	35.8
0°-40°	3505.6	55.0
0°-60°	5498.4	86.2
0°-90°	6376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3248	3248	3248	3248	3248	
5°	3192	3188	3188	3184	3184	303
15°	2985	2985	2955	2925	2914	839
25°	2587	2572	2531	2441	2373	1188
35°	2099	2084	1982	1832	1787	1312
45°	1611	1577	1442	1322	1269	1241
55°	1119	1085	984	867	822	1004
65°	665	627	567	578	481	655
75°	267	248	233	222	244	286
85°	38	41	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3247.8	3247.8	3247.8	3247.8	3247.8
2.5°	3225.3	3225.3	3225.3	3221.6	3221.6
5°	3191.5	3187.8	3187.8	3184.0	3184.0
7.5°	3165.2	3161.5	3157.7	3154.0	3146.5
10°	3127.7	3127.7	3123.9	3105.2	3101.4
12.5°	3067.6	3063.9	3048.8	3022.6	3015.1
15°	2985.0	2985.0	2955.0	2924.9	2913.7
17.5°	2894.9	2891.1	2853.6	2823.6	2808.5
20°	2797.3	2789.8	2752.2	2703.4	2677.1
22.5°	2688.4	2688.4	2643.3	2579.5	2553.2
25°	2587.0	2572.0	2530.7	2440.6	2373.0
27.5°	2470.6	2448.1	2403.0	2275.4	2196.5
30°	2343.0	2331.7	2267.9	2102.7	2042.6
32.5°	2222.8	2204.0	2136.4	1963.7	1914.9
35°	2098.9	2083.9	1982.5	1832.3	1787.3
37.5°	1975.0	1956.2	1828.6	1708.4	1652.1
40°	1851.1	1828.6	1689.6	1580.7	1520.7
42.5°	1734.7	1704.7	1569.5	1453.1	1385.5
45°	1610.8	1577.0	1441.8	1321.7	1269.1
47.5°	1486.9	1456.8	1332.9	1209.0	1149.0
50°	1355.5	1329.2	1216.5	1092.6	1028.8
52.5°	1246.6	1205.3	1096.4	972.5	919.9
55°	1118.9	1085.1	983.7	867.3	822.3
57.5°	1002.5	968.7	874.9	766.0	728.4
60°	893.6	844.8	766.0	672.1	642.1
62.5°	773.5	735.9	668.3	589.5	627.0
65°	664.6	627.0	567.0	578.2	480.6
67.5°	544.4	525.7	473.1	420.5	405.5
70°	443.1	420.5	401.8	345.4	330.4
72.5°	352.9	330.4	304.1	274.1	262.8
75°	266.6	247.8	232.8	221.5	244.1
77.5°	184.0	176.5	165.2	153.9	150.2
80°	120.2	116.4	112.6	108.9	105.1
82.5°	71.3	71.3	71.3	71.3	71.3
85°	37.5	41.3	45.1	48.8	52.6
87.5°	22.5	22.5	26.3	30.0	33.8
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)