

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: P546799

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-93-84-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: P546799
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-LD4-2LO-35-UNV-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

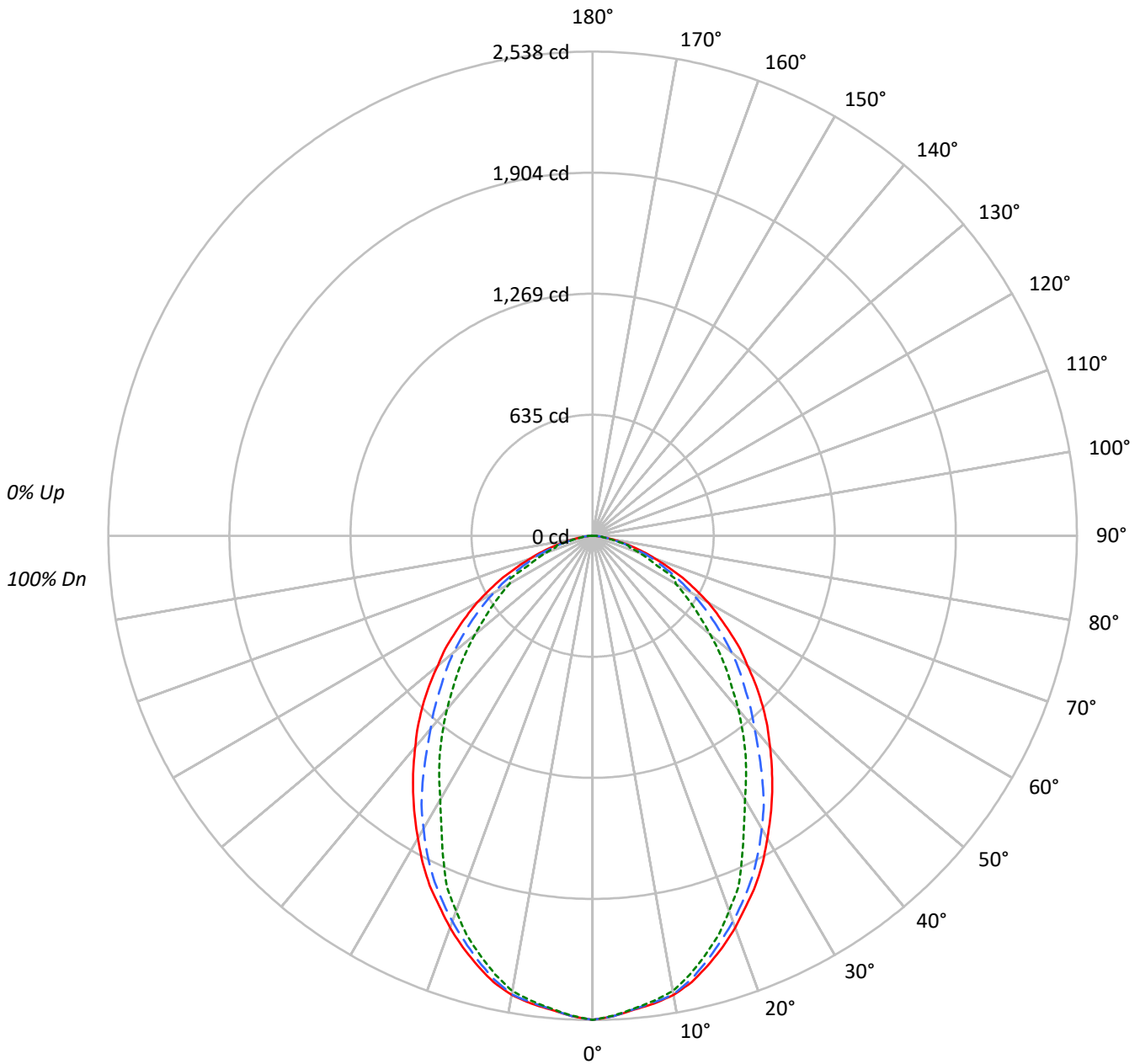
Lumens per Lamp: N/A
Luminaire Lumens: 4982.0 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3415	3415	3415
5°	3368	3364	3360
10°	3339	3335	3311
15°	3249	3216	3171
20°	3130	3079	2995
25°	3001	2936	2753
30°	2844	2753	2480
35°	2694	2544	2294
40°	2540	2319	2087
45°	2395	2144	1887
50°	2217	1990	1683
55°	2051	1803	1507
60°	1879	1611	1350
65°	1653	1410	1195
70°	1362	1235	1016
75°	1083	946	991
80°	728	682	636
85°	452	543	634



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.2	4.7
10°-20°	648.3	13.0
20°-30°	897.6	18.0
30°-40°	957.1	19.2
40°-50°	873.1	17.5
50°-60°	684.0	13.7
60°-70°	445.8	8.9
70°-80°	197.5	4.0
80°-90°	42.4	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°	1782.1	35.8
0°-40°	2739.2	55.0
0°-60°	4296.3	86.2
0°-90°	4982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2538	2538	2538	2538	2538	
5°	2494	2491	2491	2488	2488	237
15°	2332	2332	2309	2286	2277	656
25°	2021	2010	1977	1907	1854	928
35°	1640	1628	1549	1432	1396	1025
45°	1259	1232	1127	1033	992	969
55°	874	848	769	678	642	784
65°	519	490	443	452	376	512
75°	208	194	182	173	191	223
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2537.8	2537.8	2537.8	2537.8	2537.8
2.5°	2520.2	2520.2	2520.2	2517.2	2517.2
5°	2493.8	2490.8	2490.8	2487.9	2487.9
7.5°	2473.2	2470.3	2467.4	2464.4	2458.6
10°	2443.9	2443.9	2440.9	2426.3	2423.3
12.5°	2396.9	2394.0	2382.3	2361.7	2355.9
15°	2332.4	2332.4	2308.9	2285.5	2276.7
17.5°	2262.0	2259.1	2229.7	2206.2	2194.5
20°	2185.7	2179.8	2150.5	2112.4	2091.8
22.5°	2100.6	2100.6	2065.4	2015.5	1995.0
25°	2021.4	2009.7	1977.4	1907.0	1854.2
27.5°	1930.5	1912.9	1877.7	1777.9	1716.3
30°	1830.7	1821.9	1772.0	1642.9	1596.0
32.5°	1736.8	1722.2	1669.4	1534.4	1496.3
35°	1640.0	1628.3	1549.1	1431.7	1396.5
37.5°	1543.2	1528.5	1428.8	1334.9	1290.9
40°	1446.4	1428.8	1320.2	1235.1	1188.2
42.5°	1355.4	1332.0	1226.3	1135.4	1082.6
45°	1258.6	1232.2	1126.6	1032.7	991.6
47.5°	1161.8	1138.3	1041.5	944.7	897.8
50°	1059.1	1038.6	950.6	853.7	803.9
52.5°	974.0	941.8	856.7	759.9	718.8
55°	874.3	847.9	768.7	677.7	642.5
57.5°	783.3	756.9	683.6	598.5	569.2
60°	698.3	660.1	598.5	525.2	501.7
62.5°	604.4	575.0	522.2	460.6	489.9
65°	519.3	489.9	443.0	451.8	375.5
67.5°	425.4	410.7	369.7	328.6	316.9
70°	346.2	328.6	313.9	269.9	258.2
72.5°	275.8	258.2	237.6	214.2	205.4
75°	208.3	193.6	181.9	173.1	190.7
77.5°	143.8	137.9	129.1	120.3	117.4
80°	93.9	90.9	88.0	85.1	82.1
82.5°	55.7	55.7	55.7	55.7	55.7
85°	29.3	32.3	35.2	38.1	41.1
87.5°	17.6	17.6	20.5	23.5	26.4
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)