

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: P545913

Luminaire Tested: **FMR-12-4-LD4-1LO-35-UNV-80-86-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: P545913
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-12-4-LD4-1LO-35-UNV-80-86-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

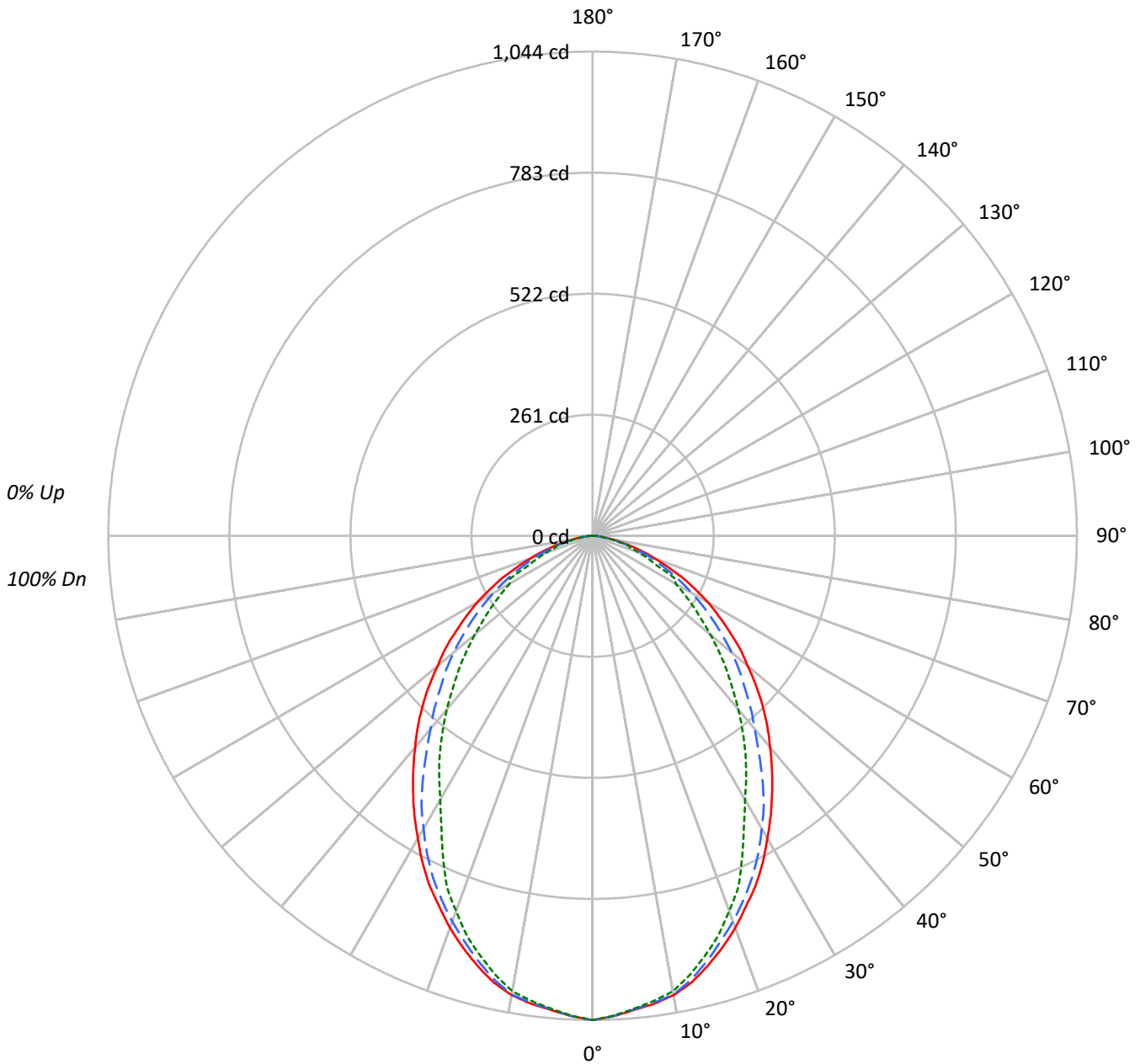
Lumens per Lamp: N/A
Luminaire Lumens: 2050.0 lumens
Efficiency: N/A
Efficacy: 87.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2810	2810	2810
5°	2772	2769	2765
10°	2748	2745	2725
15°	2674	2647	2610
20°	2576	2534	2465
25°	2470	2416	2265
30°	2341	2266	2041
35°	2217	2094	1888
40°	2091	1908	1717
45°	1971	1764	1553
50°	1824	1637	1385
55°	1688	1484	1240
60°	1546	1326	1111
65°	1361	1161	984
70°	1121	1017	836
75°	891	778	816
80°	598	561	524
85°	374	448	522



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	4.7
10°-20°	266.8	13.0
20°-30°	369.3	18.0
30°-40°	393.8	19.2
40°-50°	359.3	17.5
50°-60°	281.5	13.7
60°-70°	183.4	8.9
70°-80°	81.3	4.0
80°-90°	17.4	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°	733.3	35.8
0°-40°	1127.1	55.0
0°-60°	1767.8	86.2
0°-90°	2050.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2050.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1026	1025	1025	1024	1024	97
15°	960	960	950	940	937	270
25°	832	827	814	785	763	382
35°	675	670	637	589	575	422
45°	518	507	464	425	408	399
55°	360	349	316	279	264	323
65°	214	202	182	186	154	211
75°	86	80	75	71	78	92
85°	12	13	14	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1044.2	1044.2	1044.2	1044.2	1044.2
2.5°	1037.0	1037.0	1037.0	1035.8	1035.8
5°	1026.1	1024.9	1024.9	1023.7	1023.7
7.5°	1017.7	1016.5	1015.3	1014.1	1011.6
10°	1005.6	1005.6	1004.4	998.4	997.2
12.5°	986.3	985.1	980.3	971.8	969.4
15°	959.7	959.7	950.1	940.4	936.8
17.5°	930.8	929.6	917.5	907.8	903.0
20°	899.4	897.0	884.9	869.2	860.7
22.5°	864.4	864.4	849.9	829.4	820.9
25°	831.8	826.9	813.7	784.7	763.0
27.5°	794.3	787.1	772.6	731.6	706.2
30°	753.3	749.7	729.2	676.0	656.7
32.5°	714.7	708.6	686.9	631.4	615.7
35°	674.8	670.0	637.4	589.1	574.6
37.5°	635.0	629.0	587.9	549.3	531.2
40°	595.2	587.9	543.2	508.2	488.9
42.5°	557.7	548.1	504.6	467.2	445.5
45°	517.9	507.0	463.6	424.9	408.0
47.5°	478.1	468.4	428.6	388.7	369.4
50°	435.8	427.4	391.1	351.3	330.8
52.5°	400.8	387.5	352.5	312.7	295.8
55°	359.8	348.9	316.3	278.9	264.4
57.5°	322.3	311.5	281.3	246.3	234.2
60°	287.3	271.6	246.3	216.1	206.4
62.5°	248.7	236.6	214.9	189.5	201.6
65°	213.7	201.6	182.3	185.9	154.5
67.5°	175.0	169.0	152.1	135.2	130.4
70°	142.5	135.2	129.2	111.1	106.2
72.5°	113.5	106.2	97.8	88.1	84.5
75°	85.7	79.7	74.8	71.2	78.5
77.5°	59.2	56.7	53.1	49.5	48.3
80°	38.6	37.4	36.2	35.0	33.8
82.5°	22.9	22.9	22.9	22.9	22.9
85°	12.1	13.3	14.5	15.7	16.9
87.5°	7.2	7.2	8.5	9.7	10.9
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)