

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: P546520

Luminaire Tested: **FMR-24-4-LD4-1LO-40-UNV-80-85-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: P546520
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-LD4-1LO-40-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

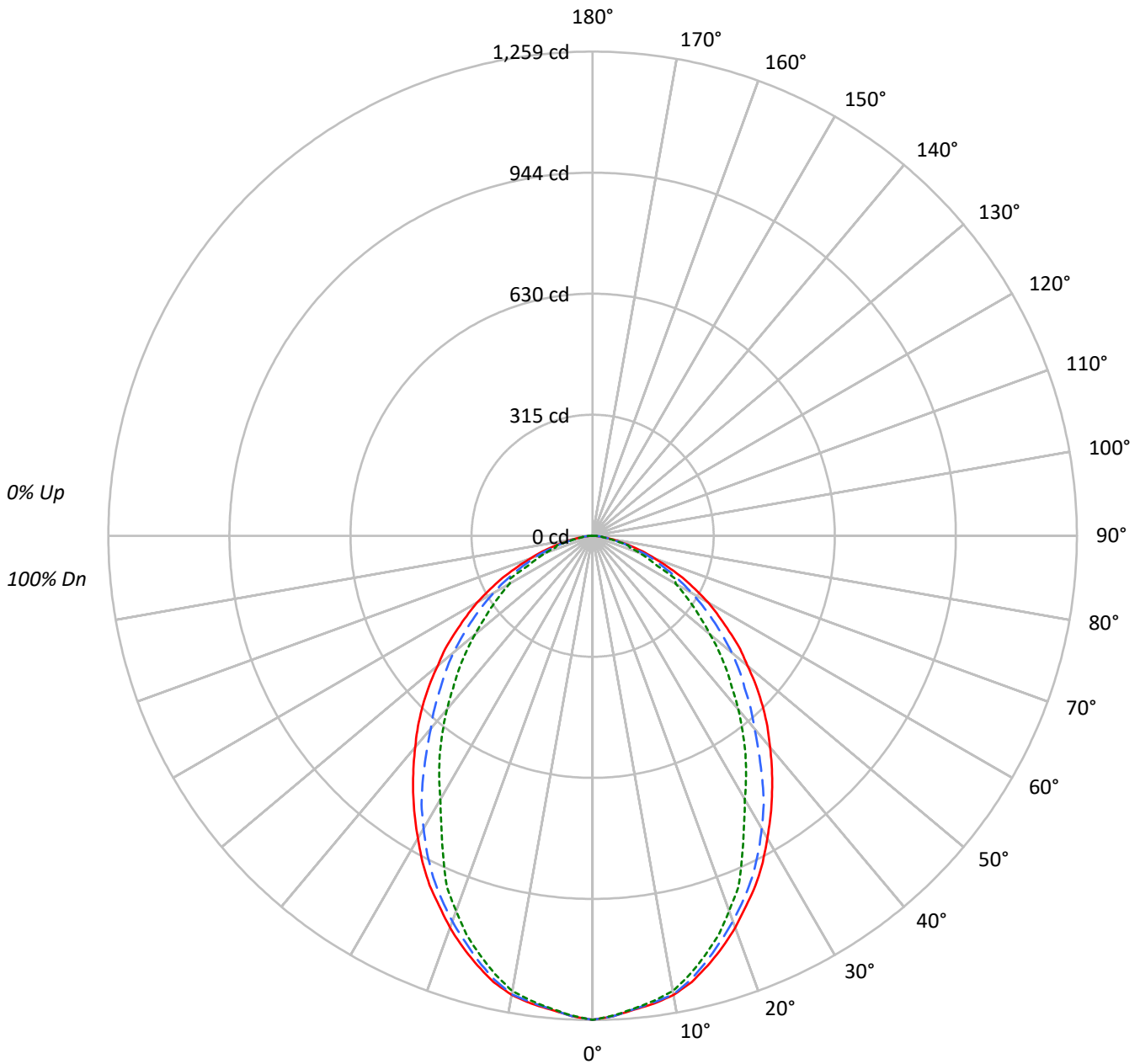
Lumens per Lamp: N/A
Luminaire Lumens: 2471.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	1694	1694	1694
5°	1671	1669	1667
10°	1656	1654	1642
15°	1611	1595	1573
20°	1552	1527	1486
25°	1488	1456	1365
30°	1411	1365	1230
35°	1336	1262	1138
40°	1260	1150	1035
45°	1188	1063	936
50°	1100	987	835
55°	1017	894	748
60°	932	799	670
65°	820	699	593
70°	675	613	504
75°	537	469	492
80°	361	339	315
85°	225	270	315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.2	4.7
10°-20°	321.6	13.0
20°-30°	445.2	18.0
30°-40°	474.7	19.2
40°-50°	433.1	17.5
50°-60°	339.2	13.7
60°-70°	221.1	8.9
70°-80°	98.0	4.0
80°-90°	21.0	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°	883.9	35.8
0°-40°	1358.6	55.0
0°-60°	2130.9	86.2
0°-90°	2471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1259	1259	1259	1259	1259	
5°	1237	1235	1235	1234	1234	117
15°	1157	1157	1145	1134	1129	325
25°	1003	997	981	946	920	460
35°	813	808	768	710	693	509
45°	624	611	559	512	492	481
55°	434	420	381	336	319	389
65°	258	243	220	224	186	254
75°	103	96	90	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1258.7	1258.7	1258.7	1258.7	1258.7
2.5°	1250.0	1250.0	1250.0	1248.5	1248.5
5°	1236.9	1235.4	1235.4	1234.0	1234.0
7.5°	1226.7	1225.2	1223.8	1222.3	1219.4
10°	1212.1	1212.1	1210.7	1203.4	1201.9
12.5°	1188.8	1187.4	1181.6	1171.4	1168.5
15°	1156.8	1156.8	1145.2	1133.6	1129.2
17.5°	1121.9	1120.5	1105.9	1094.3	1088.4
20°	1084.1	1081.2	1066.6	1047.7	1037.5
22.5°	1041.9	1041.9	1024.4	999.7	989.5
25°	1002.6	996.8	980.8	945.8	919.6
27.5°	957.5	948.7	931.3	881.8	851.3
30°	908.0	903.6	878.9	814.9	791.6
32.5°	861.4	854.2	828.0	761.0	742.1
35°	813.4	807.6	768.3	710.1	692.6
37.5°	765.4	758.1	708.7	662.1	640.3
40°	717.4	708.7	654.8	612.6	589.3
42.5°	672.3	660.6	608.2	563.1	536.9
45°	624.3	611.2	558.8	512.2	491.8
47.5°	576.2	564.6	516.6	468.6	445.3
50°	525.3	515.1	471.5	423.4	398.7
52.5°	483.1	467.1	424.9	376.9	356.5
55°	433.6	420.5	381.2	336.1	318.7
57.5°	388.5	375.4	339.0	296.8	282.3
60°	346.3	327.4	296.8	260.5	248.8
62.5°	299.8	285.2	259.0	228.5	243.0
65°	257.6	243.0	219.7	224.1	186.3
67.5°	211.0	203.7	183.3	163.0	157.2
70°	171.7	163.0	155.7	133.9	128.1
72.5°	136.8	128.1	117.9	106.2	101.9
75°	103.3	96.0	90.2	85.9	94.6
77.5°	71.3	68.4	64.0	59.7	58.2
80°	46.6	45.1	43.7	42.2	40.7
82.5°	27.6	27.6	27.6	27.6	27.6
85°	14.6	16.0	17.5	18.9	20.4
87.5°	8.7	8.7	10.2	11.6	13.1
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)