

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: P545981

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-96-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: P545981
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-50-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

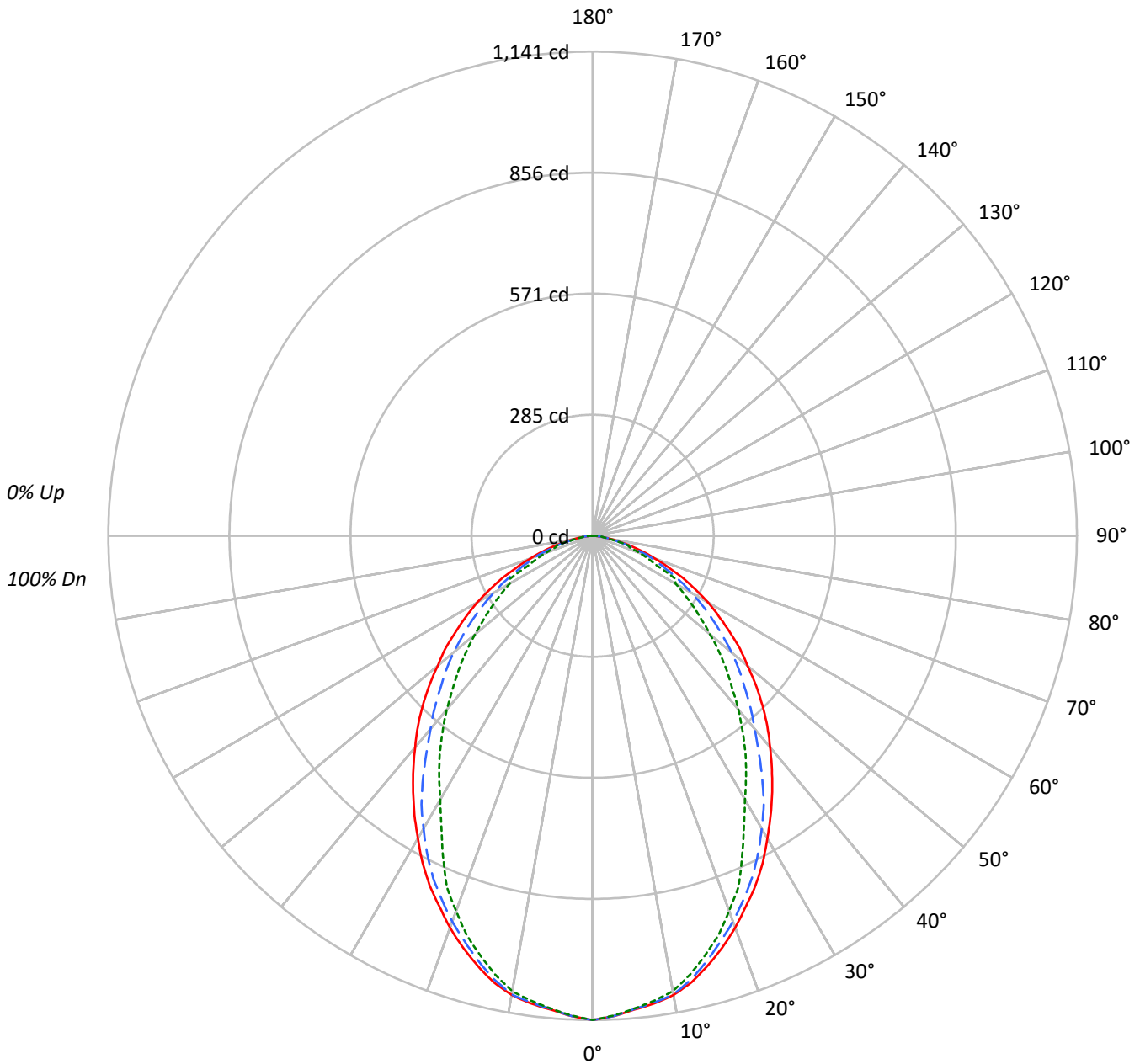
Lumens per Lamp: N/A
Luminaire Lumens: 2240.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (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									
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°	3070	3070	3070
5°	3029	3025	3022
10°	3002	2999	2977
15°	2922	2892	2852
20°	2814	2769	2693
25°	2699	2640	2475
30°	2558	2476	2230
35°	2422	2288	2063
40°	2284	2085	1877
45°	2154	1928	1697
50°	1994	1789	1513
55°	1844	1621	1355
60°	1689	1448	1214
65°	1487	1268	1075
70°	1225	1110	913
75°	974	850	891
80°	654	614	572
85°	408	488	571



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.2	4.7
10°-20°	291.5	13.0
20°-30°	403.6	18.0
30°-40°	430.3	19.2
40°-50°	392.6	17.5
50°-60°	307.5	13.7
60°-70°	200.4	8.9
70°-80°	88.8	4.0
80°-90°	19.1	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°	801.3	35.8
0°-40°	1231.6	55.0
0°-60°	1931.7	86.2
0°-90°	2240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1141	1141	1141	1141	1141	
5°	1121	1120	1120	1119	1119	106
15°	1049	1049	1038	1028	1024	295
25°	909	904	889	857	834	417
35°	737	732	696	644	628	461
45°	566	554	506	464	446	436
55°	393	381	346	305	289	353
65°	234	220	199	203	169	230
75°	94	87	82	78	86	100
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1141.0	1141.0	1141.0	1141.0	1141.0
2.5°	1133.1	1133.1	1133.1	1131.8	1131.8
5°	1121.2	1119.9	1119.9	1118.6	1118.6
7.5°	1112.0	1110.7	1109.4	1108.0	1105.4
10°	1098.8	1098.8	1097.5	1090.9	1089.6
12.5°	1077.7	1076.4	1071.1	1061.9	1059.2
15°	1048.7	1048.7	1038.1	1027.6	1023.6
17.5°	1017.0	1015.7	1002.5	992.0	986.7
20°	982.7	980.1	966.9	949.8	940.5
22.5°	944.5	944.5	928.7	906.2	897.0
25°	908.9	903.6	889.1	857.4	833.7
27.5°	868.0	860.1	844.2	799.4	771.7
30°	823.1	819.2	796.7	738.7	717.6
32.5°	780.9	774.3	750.6	689.9	672.7
35°	737.4	732.1	696.5	643.7	627.9
37.5°	693.8	687.3	642.4	600.2	580.4
40°	650.3	642.4	593.6	555.3	534.2
42.5°	609.4	598.9	551.4	510.5	486.7
45°	565.9	554.0	506.5	464.3	445.9
47.5°	522.4	511.8	468.3	424.8	403.6
50°	476.2	467.0	427.4	383.9	361.4
52.5°	437.9	423.4	385.2	341.6	323.2
55°	393.1	381.2	345.6	304.7	288.9
57.5°	352.2	340.3	307.4	269.1	255.9
60°	313.9	296.8	269.1	236.1	225.6
62.5°	271.7	258.5	234.8	207.1	220.3
65°	233.5	220.3	199.2	203.1	168.8
67.5°	191.3	184.7	166.2	147.7	142.5
70°	155.7	147.7	141.1	121.4	116.1
72.5°	124.0	116.1	106.8	96.3	92.3
75°	93.7	87.1	81.8	77.8	85.7
77.5°	64.6	62.0	58.0	54.1	52.8
80°	42.2	40.9	39.6	38.3	36.9
82.5°	25.1	25.1	25.1	25.1	25.1
85°	13.2	14.5	15.8	17.1	18.5
87.5°	7.9	7.9	9.2	10.6	11.9
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)