

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: P545918

Luminaire Tested: **FMR-12-4-LD4-1LO-35-UNV-80-97-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: P545918
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-80-97-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

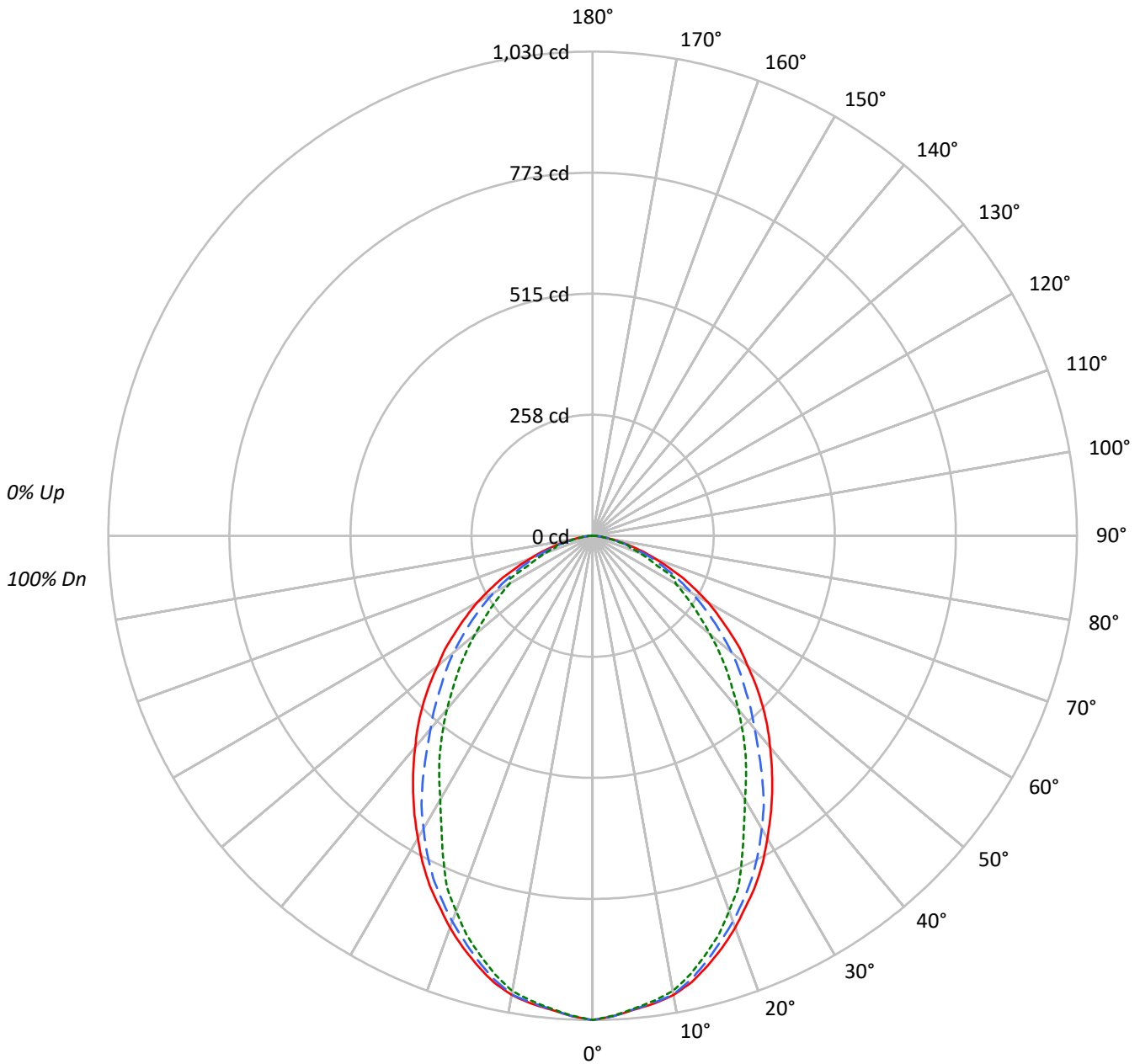
Lumens per Lamp: N/A
Luminaire Lumens: 2022.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2772	2772	2772
5°	2734	2731	2727
10°	2710	2707	2687
15°	2637	2611	2574
20°	2540	2499	2431
25°	2436	2383	2234
30°	2309	2235	2013
35°	2187	2065	1862
40°	2062	1882	1694
45°	1944	1740	1532
50°	1800	1615	1366
55°	1665	1464	1224
60°	1525	1307	1096
65°	1342	1145	970
70°	1105	1002	825
75°	879	767	805
80°	590	553	516
85°	367	442	516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	4.7
10°-20°	263.1	13.0
20°-30°	364.3	18.0
30°-40°	388.4	19.2
40°-50°	354.4	17.5
50°-60°	277.6	13.7
60°-70°	180.9	8.9
70°-80°	80.2	4.0
80°-90°	17.2	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°	723.3	35.8
0°-40°	1111.7	55.0
0°-60°	1743.7	86.2
0°-90°	2022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1012	1011	1011	1010	1010	96
15°	947	947	937	928	924	266
25°	820	816	803	774	752	377
35°	666	661	629	581	567	416
45°	511	500	457	419	402	393
55°	355	344	312	275	261	318
65°	211	199	180	183	152	208
75°	84	79	74	70	77	91
85°	12	13	14	16	17	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1030.0	1030.0	1030.0	1030.0	1030.0
2.5°	1022.8	1022.8	1022.8	1021.6	1021.6
5°	1012.1	1010.9	1010.9	1009.7	1009.7
7.5°	1003.8	1002.6	1001.4	1000.2	997.8
10°	991.9	991.9	990.7	984.7	983.5
12.5°	972.8	971.6	966.9	958.5	956.2
15°	946.6	946.6	937.1	927.6	924.0
17.5°	918.1	916.9	905.0	895.4	890.7
20°	887.1	884.7	872.8	857.3	849.0
22.5°	852.6	852.6	838.3	818.0	809.7
25°	820.4	815.6	802.6	774.0	752.5
27.5°	783.5	776.4	762.1	721.6	696.6
30°	743.0	739.4	719.2	666.8	647.8
32.5°	704.9	699.0	677.5	622.8	607.3
35°	665.6	660.9	628.7	581.1	566.8
37.5°	626.3	620.4	579.9	541.8	523.9
40°	587.0	579.9	535.8	501.3	482.2
42.5°	550.1	540.6	497.7	460.8	439.4
45°	510.8	500.1	457.2	419.1	402.5
47.5°	471.5	462.0	422.7	383.4	364.4
50°	429.9	421.5	385.8	346.5	326.3
52.5°	395.3	382.2	347.7	308.4	291.7
55°	354.8	344.1	312.0	275.1	260.8
57.5°	317.9	307.2	277.4	242.9	231.0
60°	283.4	267.9	242.9	213.1	203.6
62.5°	245.3	233.4	211.9	186.9	198.9
65°	210.8	198.9	179.8	183.4	152.4
67.5°	172.7	166.7	150.0	133.4	128.6
70°	140.5	133.4	127.4	109.5	104.8
72.5°	111.9	104.8	96.4	86.9	83.4
75°	84.5	78.6	73.8	70.3	77.4
77.5°	58.3	56.0	52.4	48.8	47.6
80°	38.1	36.9	35.7	34.5	33.3
82.5°	22.6	22.6	22.6	22.6	22.6
85°	11.9	13.1	14.3	15.5	16.7
87.5°	7.1	7.1	8.3	9.5	10.7
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)