

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: P545563

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-80-88-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: P545563
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-12-2-LD4-2HI-40-UNV-80-88-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

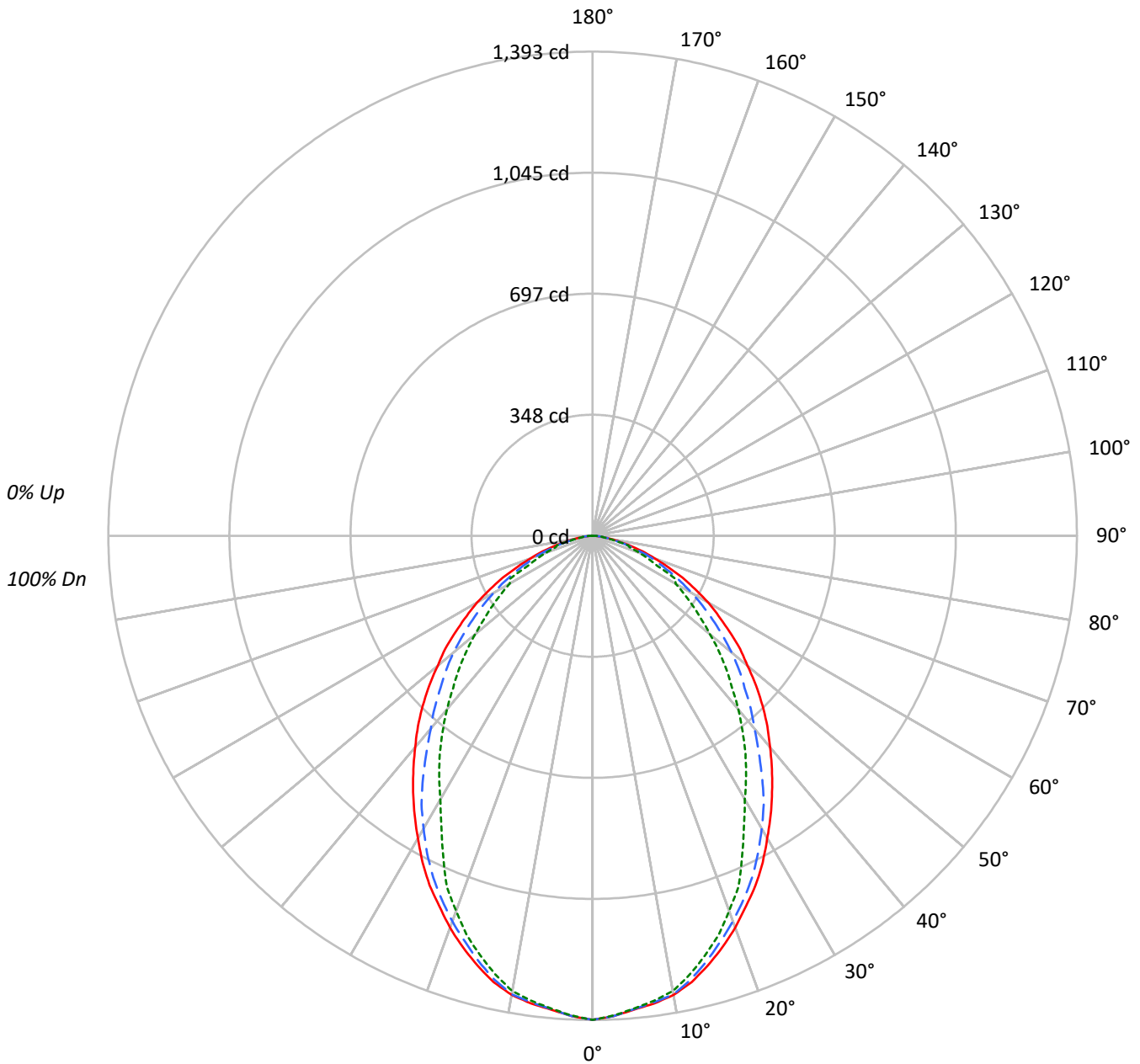
Lumens per Lamp: N/A
Luminaire Lumens: 2734.0 lumens
Efficiency: N/A
Efficacy: 63.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	7495	7495	7495
5°	7393	7385	7376
10°	7329	7320	7268
15°	7132	7060	6961
20°	6870	6759	6574
25°	6587	6444	6042
30°	6243	6043	5443
35°	5913	5585	5035
40°	5576	5090	4581
45°	5257	4705	4142
50°	4866	4367	3693
55°	4502	3958	3309
60°	4125	3535	2963
65°	3629	3096	2625
70°	2990	2711	2230
75°	2377	2075	2177
80°	1596	1497	1398
85°	994	1192	1389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.6	4.7
10°-20°	355.8	13.0
20°-30°	492.6	18.0
30°-40°	525.2	19.2
40°-50°	479.1	17.5
50°-60°	375.4	13.7
60°-70°	244.7	8.9
70°-80°	108.4	4.0
80°-90°	23.3	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°	978.0	35.8
0°-40°	1503.2	55.0
0°-60°	2357.7	86.2
0°-90°	2734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2734.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1393	1393	1393	1393	1393	
5°	1368	1367	1367	1365	1365	130
15°	1280	1280	1267	1254	1249	360
25°	1109	1103	1085	1046	1018	509
35°	900	894	850	786	766	563
45°	691	676	618	567	544	532
55°	480	465	422	372	353	430
65°	285	269	243	248	206	281
75°	114	106	100	95	105	123
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1392.7	1392.7	1392.7	1392.7	1392.7
2.5°	1383.0	1383.0	1383.0	1381.4	1381.4
5°	1368.5	1366.9	1366.9	1365.3	1365.3
7.5°	1357.2	1355.6	1354.0	1352.4	1349.2
10°	1341.1	1341.1	1339.5	1331.5	1329.9
12.5°	1315.4	1313.8	1307.3	1296.1	1292.8
15°	1280.0	1280.0	1267.1	1254.2	1249.4
17.5°	1241.3	1239.7	1223.6	1210.7	1204.3
20°	1199.5	1196.2	1180.1	1159.2	1147.9
22.5°	1152.8	1152.8	1133.5	1106.1	1094.8
25°	1109.3	1102.9	1085.2	1046.5	1017.5
27.5°	1059.4	1049.7	1030.4	975.7	941.9
30°	1004.6	999.8	972.4	901.6	875.8
32.5°	953.1	945.1	916.1	842.0	821.1
35°	900.0	893.6	850.1	785.7	766.4
37.5°	846.9	838.8	784.1	732.6	708.4
40°	793.7	784.1	724.5	677.8	652.1
42.5°	743.8	730.9	673.0	623.1	594.1
45°	690.7	676.2	618.2	566.7	544.2
47.5°	637.6	624.7	571.6	518.4	492.7
50°	581.2	569.9	521.6	468.5	441.1
52.5°	534.5	516.8	470.1	417.0	394.5
55°	479.8	465.3	421.8	371.9	352.6
57.5°	429.9	415.4	375.1	328.4	312.3
60°	383.2	362.3	328.4	288.2	275.3
62.5°	331.7	315.6	286.6	252.8	268.9
65°	285.0	268.9	243.1	247.9	206.1
67.5°	233.5	225.4	202.9	180.3	173.9
70°	190.0	180.3	172.3	148.1	141.7
72.5°	151.3	141.7	130.4	117.5	112.7
75°	114.3	106.3	99.8	95.0	104.7
77.5°	78.9	75.7	70.8	66.0	64.4
80°	51.5	49.9	48.3	46.7	45.1
82.5°	30.6	30.6	30.6	30.6	30.6
85°	16.1	17.7	19.3	20.9	22.5
87.5°	9.7	9.7	11.3	12.9	14.5
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)