

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: P546551

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-80-84-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: P546551
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-50-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

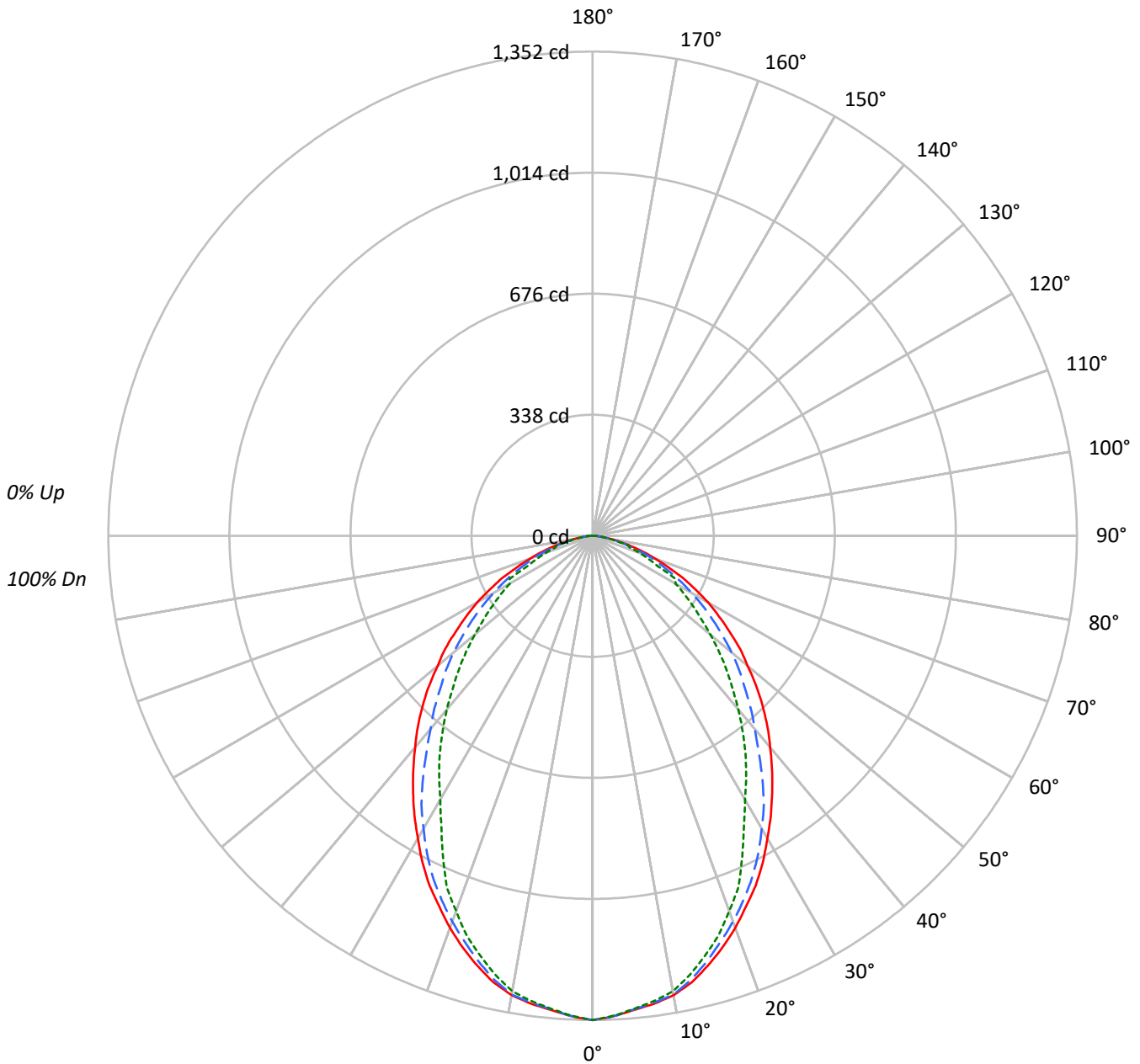
Lumens per Lamp: N/A
Luminaire Lumens: 2655.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1820	1820	1820
5°	1795	1793	1791
10°	1779	1777	1764
15°	1731	1714	1690
20°	1668	1641	1596
25°	1599	1564	1467
30°	1516	1467	1321
35°	1436	1356	1222
40°	1354	1236	1112
45°	1276	1142	1006
50°	1181	1060	897
55°	1093	961	803
60°	1001	858	720
65°	881	752	637
70°	726	658	541
75°	577	504	528
80°	387	363	339
85°	241	290	338



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.9	4.7
10°-20°	345.5	13.0
20°-30°	478.3	18.0
30°-40°	510.0	19.2
40°-50°	465.3	17.5
50°-60°	364.5	13.7
60°-70°	237.6	8.9
70°-80°	105.2	4.0
80°-90°	22.6	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°	949.7	35.8
0°-40°	1459.7	55.0
0°-60°	2289.6	86.2
0°-90°	2655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2655.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1352	1352	1352	1352	1352	
5°	1329	1327	1327	1326	1326	126
15°	1243	1243	1230	1218	1213	349
25°	1077	1071	1054	1016	988	495
35°	874	868	826	763	744	546
45°	671	657	600	550	528	517
55°	466	452	410	361	342	418
65°	277	261	236	241	200	273
75°	111	103	97	92	102	119
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1352.4	1352.4	1352.4	1352.4	1352.4
2.5°	1343.0	1343.0	1343.0	1341.5	1341.5
5°	1329.0	1327.4	1327.4	1325.8	1325.8
7.5°	1318.0	1316.5	1314.9	1313.3	1310.2
10°	1302.4	1302.4	1300.8	1293.0	1291.4
12.5°	1277.4	1275.8	1269.6	1258.6	1255.5
15°	1243.0	1243.0	1230.5	1218.0	1213.3
17.5°	1205.5	1203.9	1188.3	1175.7	1169.5
20°	1164.8	1161.7	1146.0	1125.7	1114.8
22.5°	1119.5	1119.5	1100.7	1074.1	1063.2
25°	1077.2	1071.0	1053.8	1016.3	988.1
27.5°	1028.8	1019.4	1000.6	947.5	914.6
30°	975.6	970.9	944.3	875.6	850.5
32.5°	925.6	917.8	889.6	817.7	797.4
35°	874.0	867.7	825.5	763.0	744.2
37.5°	822.4	814.6	761.4	711.4	687.9
40°	770.8	761.4	703.6	658.2	633.2
42.5°	722.3	709.8	653.5	605.1	576.9
45°	670.7	656.7	600.4	550.3	528.5
47.5°	619.1	606.6	555.0	503.4	478.4
50°	564.4	553.5	506.6	455.0	428.4
52.5°	519.1	501.9	456.5	404.9	383.1
55°	465.9	451.8	409.6	361.2	342.4
57.5°	417.5	403.4	364.3	319.0	303.3
60°	372.1	351.8	319.0	279.9	267.4
62.5°	322.1	306.4	278.3	245.5	261.1
65°	276.7	261.1	236.1	240.8	200.1
67.5°	226.7	218.9	197.0	175.1	168.9
70°	184.5	175.1	167.3	143.8	137.6
72.5°	147.0	137.6	126.6	114.1	109.4
75°	111.0	103.2	96.9	92.2	101.6
77.5°	76.6	73.5	68.8	64.1	62.5
80°	50.0	48.5	46.9	45.3	43.8
82.5°	29.7	29.7	29.7	29.7	29.7
85°	15.6	17.2	18.8	20.3	21.9
87.5°	9.4	9.4	10.9	12.5	14.1
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)