

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: P546570

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-82-87-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: P546570
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-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

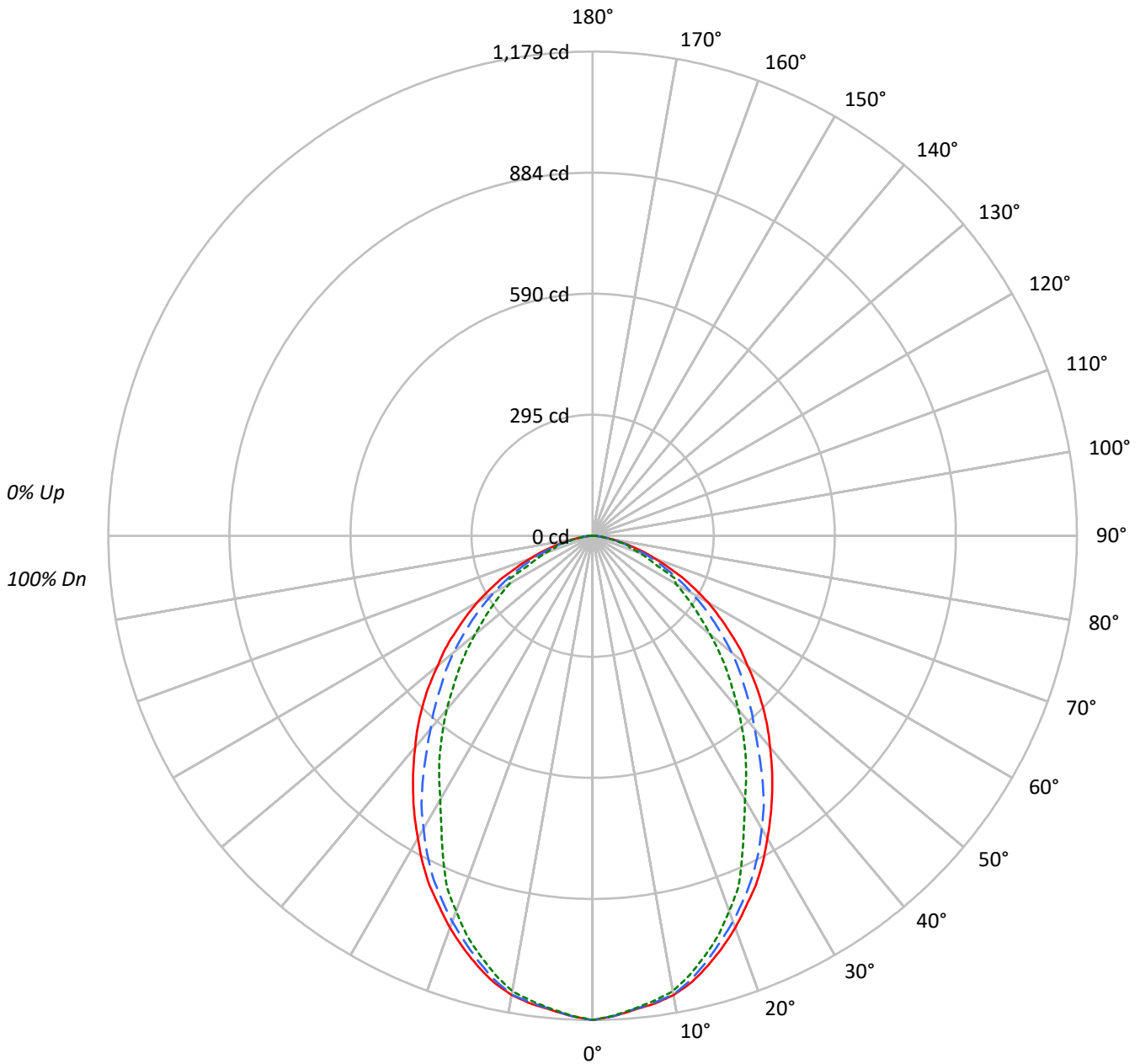
Lumens per Lamp: N/A
Luminaire Lumens: 2315.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1587	1587	1587
5°	1565	1563	1561
10°	1552	1550	1539
15°	1510	1494	1474
20°	1454	1431	1392
25°	1394	1364	1279
30°	1322	1279	1152
35°	1252	1182	1066
40°	1180	1078	970
45°	1113	996	877
50°	1030	925	782
55°	953	838	700
60°	873	748	627
65°	768	656	556
70°	633	574	472
75°	503	439	461
80°	338	317	296
85°	210	253	295



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.8	4.7
10°-20°	301.3	13.0
20°-30°	417.1	18.0
30°-40°	444.7	19.2
40°-50°	405.7	17.5
50°-60°	317.8	13.7
60°-70°	207.2	8.9
70°-80°	91.8	4.0
80°-90°	19.7	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°	828.1	35.8
0°-40°	1272.8	55.0
0°-60°	1996.4	86.2
0°-90°	2315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2315.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1179	1179	1179	1179	1179	
5°	1159	1157	1157	1156	1156	110
15°	1084	1084	1073	1062	1058	305
25°	939	934	919	886	862	431
35°	762	757	720	665	649	476
45°	585	573	524	480	461	450
55°	406	394	357	315	299	364
65°	241	228	206	210	174	238
75°	97	90	84	80	89	104
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1179.2	1179.2	1179.2	1179.2	1179.2
2.5°	1171.1	1171.1	1171.1	1169.7	1169.7
5°	1158.8	1157.4	1157.4	1156.1	1156.1
7.5°	1149.2	1147.9	1146.5	1145.1	1142.4
10°	1135.6	1135.6	1134.2	1127.4	1126.1
12.5°	1113.8	1112.4	1107.0	1097.4	1094.7
15°	1083.8	1083.8	1072.9	1062.0	1057.9
17.5°	1051.1	1049.7	1036.1	1025.2	1019.7
20°	1015.6	1012.9	999.3	981.6	972.0
22.5°	976.1	976.1	959.7	936.6	927.0
25°	939.3	933.8	918.8	886.1	861.6
27.5°	897.0	888.9	872.5	826.1	797.5
30°	850.7	846.6	823.4	763.4	741.6
32.5°	807.1	800.2	775.7	713.0	695.3
35°	762.1	756.6	719.8	665.3	648.9
37.5°	717.1	710.3	663.9	620.3	599.8
40°	672.1	663.9	613.5	573.9	552.1
42.5°	629.8	618.9	569.8	527.6	503.0
45°	584.8	572.6	523.5	479.9	460.8
47.5°	539.9	528.9	484.0	439.0	417.2
50°	492.1	482.6	441.7	396.7	373.5
52.5°	452.6	437.6	398.1	353.1	334.0
55°	406.3	394.0	357.2	314.9	298.6
57.5°	364.0	351.7	317.6	278.1	264.5
60°	324.5	306.7	278.1	244.0	233.1
62.5°	280.8	267.2	242.7	214.0	227.7
65°	241.3	227.7	205.9	209.9	174.5
67.5°	197.7	190.9	171.8	152.7	147.2
70°	160.9	152.7	145.9	125.4	120.0
72.5°	128.1	120.0	110.4	99.5	95.4
75°	96.8	90.0	84.5	80.4	88.6
77.5°	66.8	64.1	60.0	55.9	54.5
80°	43.6	42.3	40.9	39.5	38.2
82.5°	25.9	25.9	25.9	25.9	25.9
85°	13.6	15.0	16.4	17.7	19.1
87.5°	8.2	8.2	9.5	10.9	12.3
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)