

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: P546561

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-81-86-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: P546561
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-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

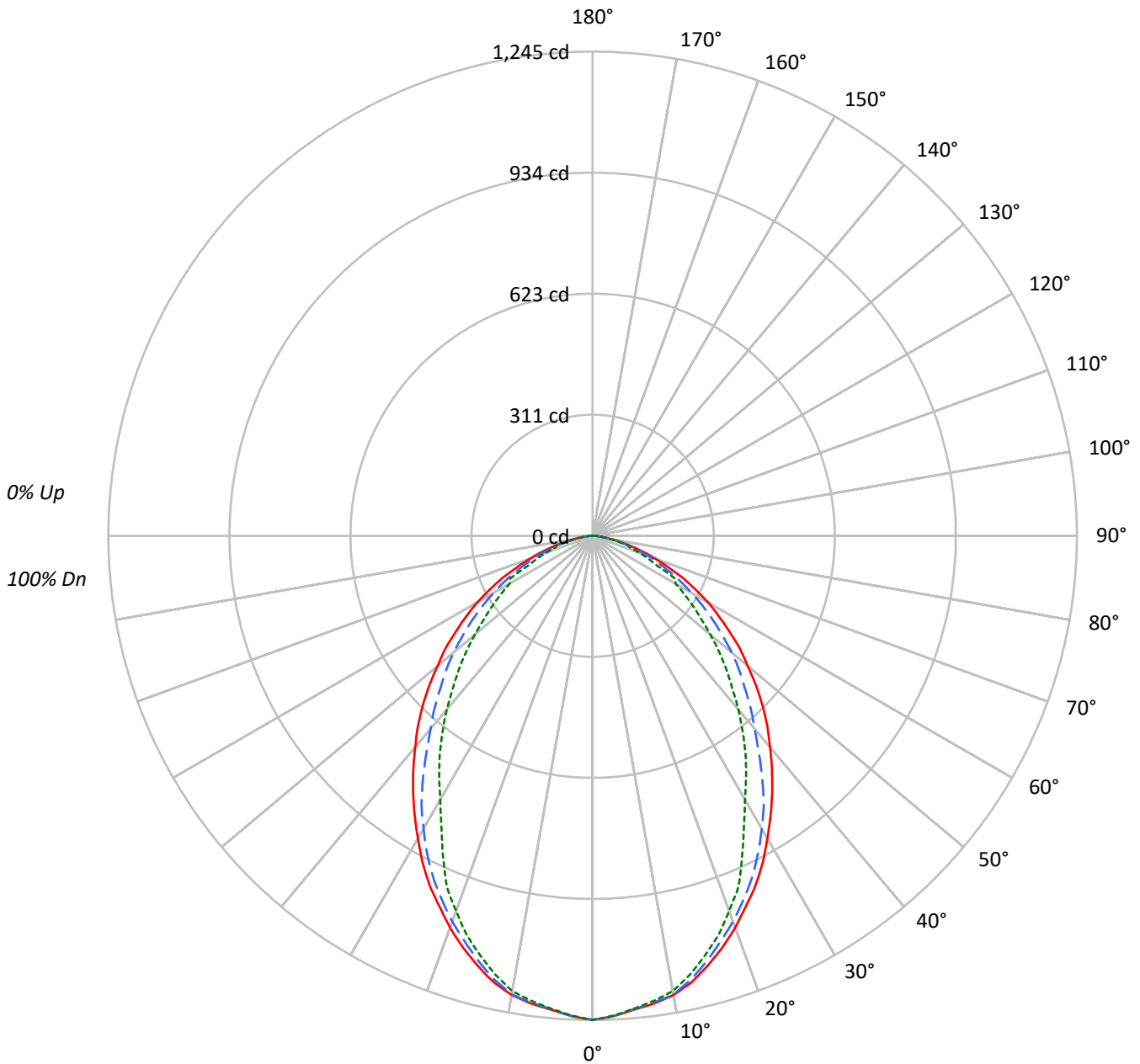
Lumens per Lamp: N/A
Luminaire Lumens: 2444.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1675	1675	1675
5°	1652	1650	1648
10°	1638	1636	1624
15°	1594	1578	1556
20°	1535	1511	1469
25°	1472	1440	1350
30°	1395	1351	1216
35°	1321	1248	1125
40°	1246	1138	1024
45°	1175	1052	926
50°	1088	976	826
55°	1006	885	739
60°	922	790	662
65°	811	692	586
70°	668	606	498
75°	531	464	487
80°	357	335	312
85°	222	267	310



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	4.7
10°-20°	318.0	13.0
20°-30°	440.3	18.0
30°-40°	469.5	19.2
40°-50°	428.3	17.5
50°-60°	335.6	13.7
60°-70°	218.7	8.9
70°-80°	96.9	4.0
80°-90°	20.8	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°	874.2	35.8
0°-40°	1343.7	55.0
0°-60°	2107.6	86.2
0°-90°	2444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1245	1245	1245	1245	1245	
5°	1223	1222	1222	1220	1220	116
15°	1144	1144	1133	1121	1117	322
25°	992	986	970	936	910	455
35°	804	799	760	702	685	503
45°	617	604	553	507	486	476
55°	429	416	377	332	315	385
65°	255	240	217	222	184	251
75°	102	95	89	85	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1244.9	1244.9	1244.9	1244.9	1244.9
2.5°	1236.3	1236.3	1236.3	1234.9	1234.9
5°	1223.4	1221.9	1221.9	1220.5	1220.5
7.5°	1213.3	1211.8	1210.4	1209.0	1206.1
10°	1198.9	1198.9	1197.4	1190.2	1188.8
12.5°	1175.9	1174.4	1168.7	1158.6	1155.7
15°	1144.2	1144.2	1132.7	1121.2	1116.8
17.5°	1109.7	1108.2	1093.8	1082.3	1076.6
20°	1072.2	1069.4	1055.0	1036.3	1026.2
22.5°	1030.5	1030.5	1013.2	988.8	978.7
25°	991.6	985.9	970.0	935.5	909.6
27.5°	947.0	938.4	921.1	872.2	842.0
30°	898.1	893.8	869.3	806.0	782.9
32.5°	852.0	844.8	818.9	752.7	734.0
35°	804.5	798.8	759.9	702.3	685.1
37.5°	757.0	749.8	700.9	654.9	633.3
40°	709.5	700.9	647.7	605.9	582.9
42.5°	664.9	653.4	601.6	557.0	531.1
45°	617.4	604.5	552.7	506.6	486.5
47.5°	569.9	558.4	510.9	463.4	440.4
50°	519.6	509.5	466.3	418.8	394.4
52.5°	477.8	462.0	420.3	372.8	352.6
55°	428.9	415.9	377.1	332.5	315.2
57.5°	384.3	371.3	335.3	293.6	279.2
60°	342.5	323.8	293.6	257.6	246.1
62.5°	296.5	282.1	256.2	226.0	240.4
65°	254.7	240.4	217.3	221.6	184.2
67.5°	208.7	201.5	181.3	161.2	155.4
70°	169.8	161.2	154.0	132.4	126.7
72.5°	135.3	126.7	116.6	105.1	100.7
75°	102.2	95.0	89.2	84.9	93.6
77.5°	70.5	67.6	63.3	59.0	57.6
80°	46.1	44.6	43.2	41.7	40.3
82.5°	27.3	27.3	27.3	27.3	27.3
85°	14.4	15.8	17.3	18.7	20.1
87.5°	8.6	8.6	10.1	11.5	13.0
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)