

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: P546536

Luminaire Tested: **FMR-24-4-LD4-1LO-40-UNV-82-85-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: P546536
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-40-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

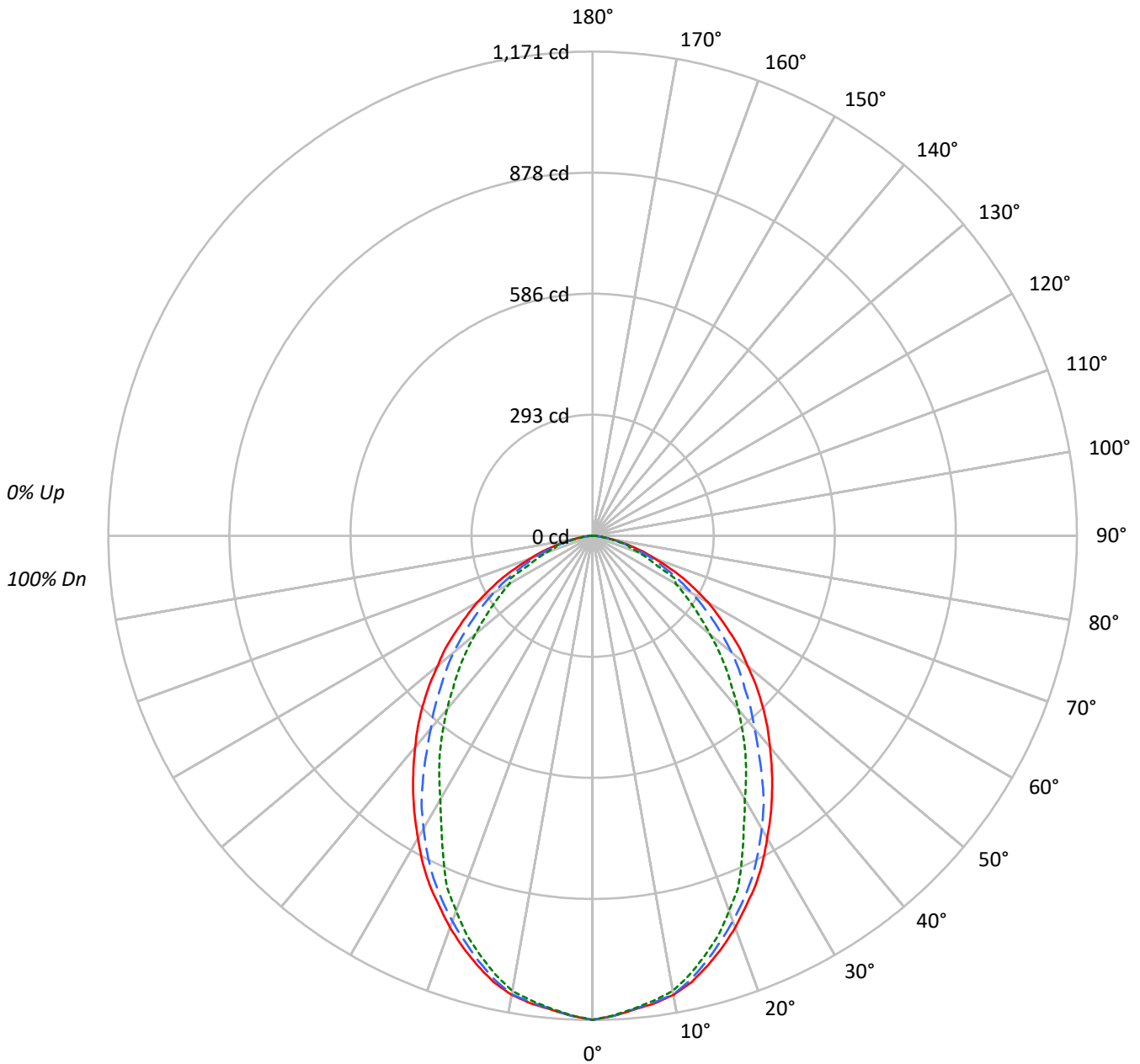
Lumens per Lamp: N/A
Luminaire Lumens: 2298.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1575	1575	1575
5°	1554	1552	1550
10°	1540	1538	1527
15°	1499	1483	1463
20°	1444	1420	1382
25°	1384	1354	1270
30°	1312	1270	1144
35°	1243	1174	1058
40°	1172	1070	963
45°	1105	989	870
50°	1023	918	776
55°	946	832	695
60°	867	743	623
65°	762	650	551
70°	628	570	469
75°	500	436	457
80°	336	315	294
85°	208	250	292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.0	4.7
10°-20°	299.0	13.0
20°-30°	414.0	18.0
30°-40°	441.5	19.2
40°-50°	402.7	17.5
50°-60°	315.5	13.7
60°-70°	205.6	8.9
70°-80°	91.1	4.0
80°-90°	19.6	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°	822.0	35.8
0°-40°	1263.5	55.0
0°-60°	1981.7	86.2
0°-90°	2298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1171	1171	1171	1171	1171	
5°	1150	1149	1149	1148	1148	109
15°	1076	1076	1065	1054	1050	302
25°	932	927	912	880	855	428
35°	756	751	714	660	644	473
45°	580	568	520	476	457	447
55°	403	391	355	313	296	362
65°	240	226	204	208	173	236
75°	96	89	84	80	88	103
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°	1170.6	1170.6	1170.6	1170.6	1170.6
2.5°	1162.5	1162.5	1162.5	1161.1	1161.1
5°	1150.3	1148.9	1148.9	1147.6	1147.6
7.5°	1140.8	1139.4	1138.1	1136.7	1134.0
10°	1127.3	1127.3	1125.9	1119.1	1117.8
12.5°	1105.6	1104.3	1098.8	1089.4	1086.7
15°	1075.8	1075.8	1065.0	1054.2	1050.1
17.5°	1043.4	1042.0	1028.5	1017.7	1012.2
20°	1008.2	1005.5	991.9	974.3	964.9
22.5°	968.9	968.9	952.7	929.7	920.2
25°	932.4	927.0	912.1	879.6	855.3
27.5°	890.4	882.3	866.1	820.1	791.7
30°	844.4	840.4	817.4	757.8	736.2
32.5°	801.1	794.4	770.0	707.8	690.2
35°	756.5	751.1	714.5	660.4	644.2
37.5°	711.8	705.0	659.0	615.7	595.4
40°	667.2	659.0	609.0	569.7	548.1
42.5°	625.2	614.4	565.7	523.7	499.4
45°	580.5	568.4	519.7	476.3	457.4
47.5°	535.9	525.1	480.4	435.7	414.1
50°	488.5	479.1	438.5	393.8	370.8
52.5°	449.3	434.4	395.2	350.5	331.5
55°	403.3	391.1	354.6	312.6	296.4
57.5°	361.3	349.1	315.3	276.1	262.5
60°	322.1	304.5	276.1	242.2	231.4
62.5°	278.8	265.2	240.9	212.5	226.0
65°	239.5	226.0	204.3	208.4	173.2
67.5°	196.2	189.5	170.5	151.6	146.2
70°	159.7	151.6	144.8	124.5	119.1
72.5°	127.2	119.1	109.6	98.8	94.7
75°	96.1	89.3	83.9	79.8	88.0
77.5°	66.3	63.6	59.5	55.5	54.1
80°	43.3	42.0	40.6	39.2	37.9
82.5°	25.7	25.7	25.7	25.7	25.7
85°	13.5	14.9	16.2	17.6	18.9
87.5°	8.1	8.1	9.5	10.8	12.2
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)