

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: P546552

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-80-85-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: P546552
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-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

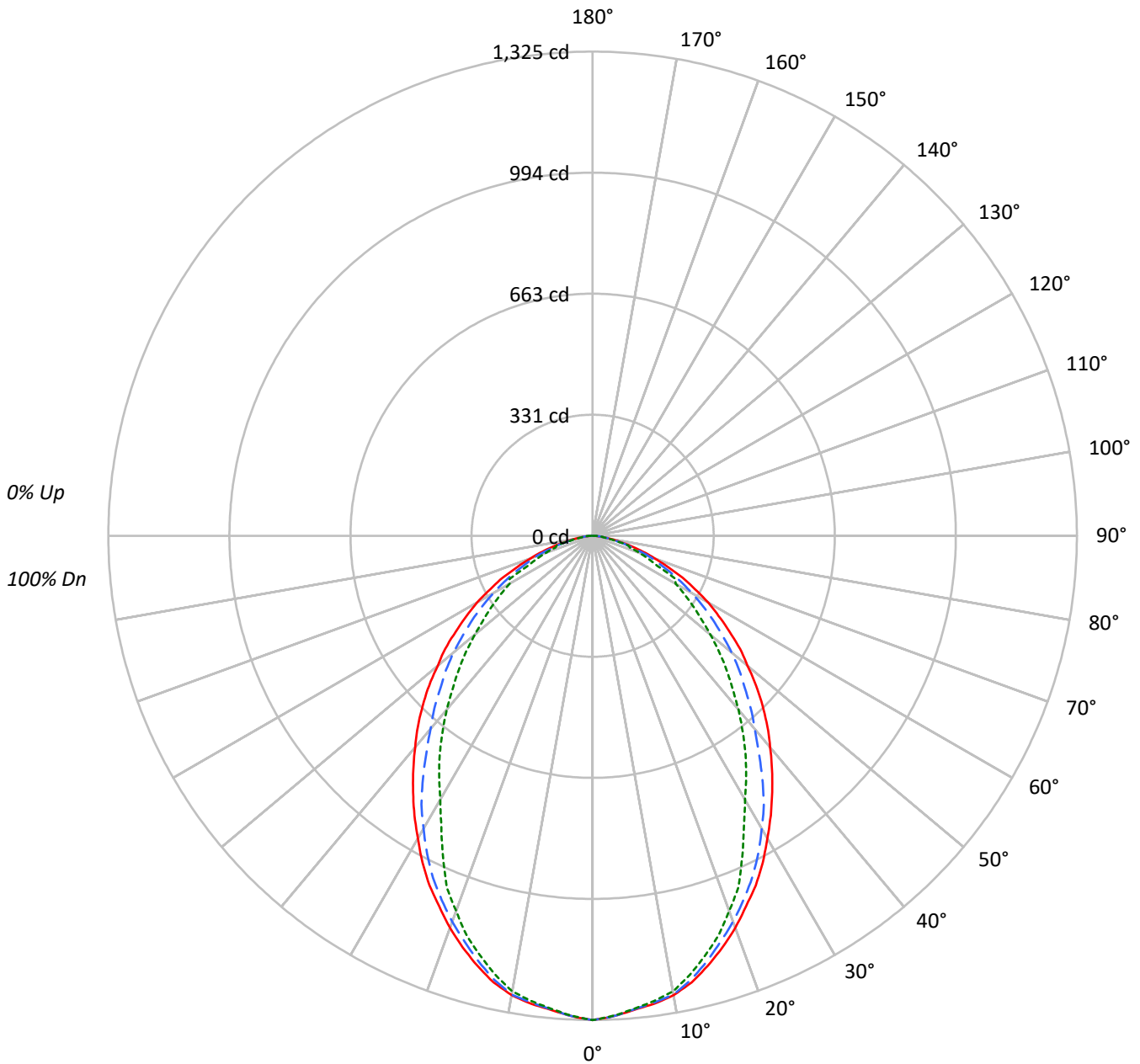
Lumens per Lamp: N/A
Luminaire Lumens: 2602.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1783	1783	1783
5°	1759	1757	1755
10°	1744	1742	1729
15°	1697	1680	1656
20°	1635	1608	1564
25°	1567	1533	1438
30°	1485	1438	1295
35°	1407	1329	1198
40°	1327	1211	1090
45°	1251	1120	985
50°	1158	1039	879
55°	1071	942	787
60°	981	841	705
65°	863	737	624
70°	711	645	530
75°	566	494	518
80°	380	356	332
85°	236	284	332



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	4.7
10°-20°	338.6	13.0
20°-30°	468.8	18.0
30°-40°	499.8	19.2
40°-50°	456.0	17.5
50°-60°	357.3	13.7
60°-70°	232.8	8.9
70°-80°	103.2	4.0
80°-90°	22.1	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°	930.8	35.8
0°-40°	1430.6	55.0
0°-60°	2243.9	86.2
0°-90°	2602.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2602.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1325	1325	1325	1325	1325	
5°	1302	1301	1301	1299	1299	124
15°	1218	1218	1206	1194	1189	342
25°	1056	1050	1033	996	968	485
35°	856	850	809	748	729	535
45°	657	644	588	539	518	506
55°	457	443	402	354	336	410
65°	271	256	231	236	196	267
75°	109	101	95	90	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1325.4	1325.4	1325.4	1325.4	1325.4
2.5°	1316.2	1316.2	1316.2	1314.7	1314.7
5°	1302.4	1300.9	1300.9	1299.4	1299.4
7.5°	1291.7	1290.2	1288.6	1287.1	1284.1
10°	1276.4	1276.4	1274.9	1267.2	1265.7
12.5°	1251.9	1250.3	1244.2	1233.5	1230.4
15°	1218.2	1218.2	1205.9	1193.6	1189.1
17.5°	1181.4	1179.9	1164.5	1152.3	1146.1
20°	1141.6	1138.5	1123.2	1103.2	1092.5
22.5°	1097.1	1097.1	1078.7	1052.7	1042.0
25°	1055.7	1049.6	1032.8	996.0	968.4
27.5°	1008.2	999.0	980.7	928.6	896.4
30°	956.1	951.5	925.5	858.1	833.6
32.5°	907.1	899.4	871.9	801.4	781.5
35°	856.5	850.4	809.0	747.8	729.4
37.5°	806.0	798.3	746.2	697.2	674.2
40°	755.4	746.2	689.5	645.1	620.6
42.5°	707.9	695.7	640.5	593.0	565.4
45°	657.3	643.6	588.4	539.4	517.9
47.5°	606.8	594.5	544.0	493.4	468.9
50°	553.2	542.4	496.5	445.9	419.8
52.5°	508.7	491.9	447.4	396.9	375.4
55°	456.6	442.8	401.5	354.0	335.6
57.5°	409.1	395.3	357.0	312.6	297.3
60°	364.7	344.8	312.6	274.3	262.0
62.5°	315.7	300.3	272.7	240.6	255.9
65°	271.2	255.9	231.4	236.0	196.1
67.5°	222.2	214.5	193.1	171.6	165.5
70°	180.8	171.6	164.0	141.0	134.8
72.5°	144.0	134.8	124.1	111.9	107.3
75°	108.8	101.1	95.0	90.4	99.6
77.5°	75.1	72.0	67.4	62.8	61.3
80°	49.0	47.5	46.0	44.4	42.9
82.5°	29.1	29.1	29.1	29.1	29.1
85°	15.3	16.9	18.4	19.9	21.5
87.5°	9.2	9.2	10.7	12.3	13.8
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)