

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: P546076

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-80-94-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: P546076
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-12-4-LD4-1STD-50-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

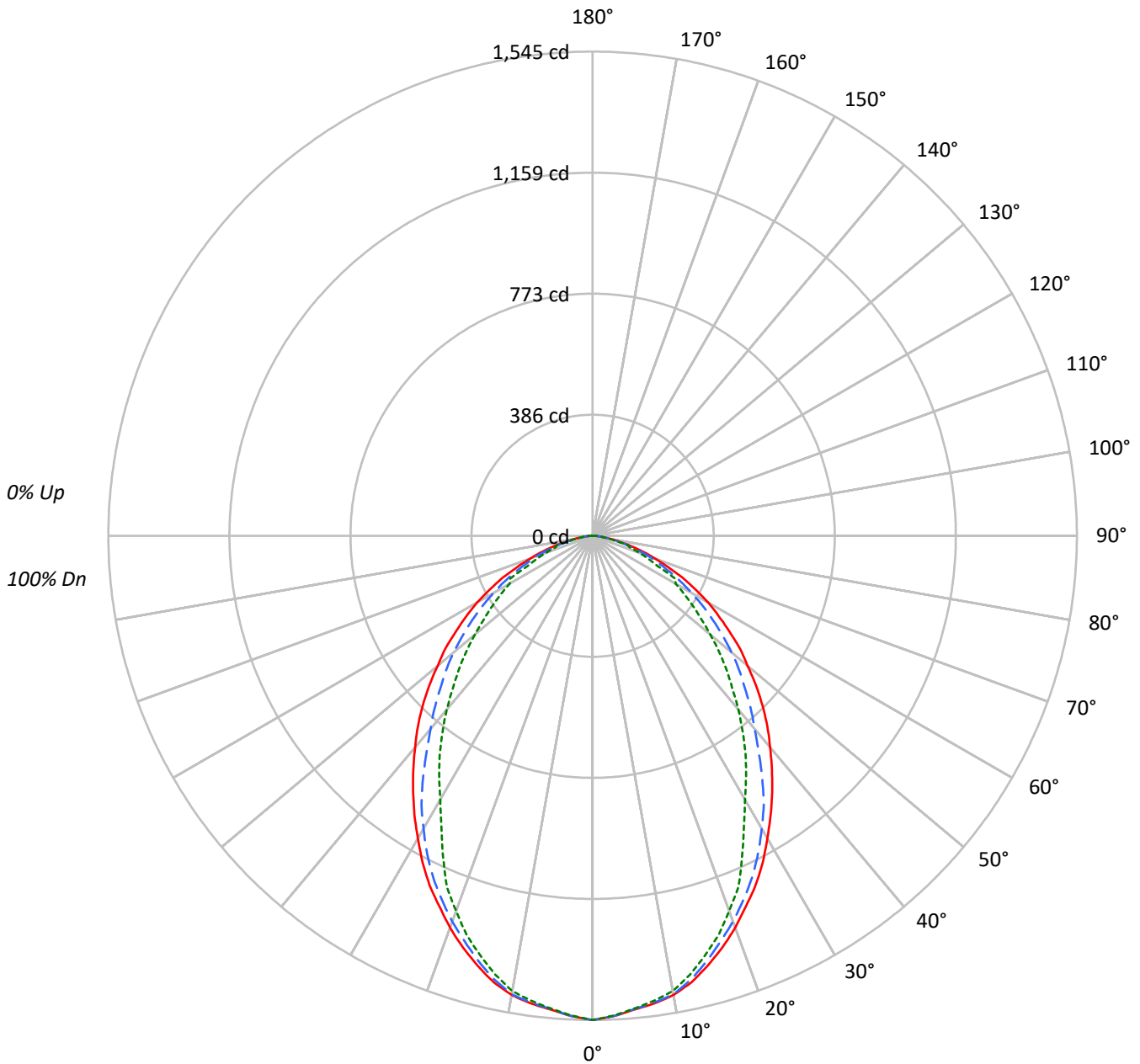
Lumens per Lamp: N/A
Luminaire Lumens: 3033.0 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	4158	4158	4158
5°	4101	4096	4091
10°	4065	4060	4031
15°	3956	3916	3861
20°	3810	3749	3647
25°	3654	3574	3352
30°	3463	3352	3019
35°	3280	3098	2793
40°	3093	2823	2541
45°	2916	2610	2297
50°	2699	2423	2049
55°	2497	2196	1835
60°	2288	1961	1644
65°	2013	1717	1456
70°	1659	1504	1237
75°	1318	1151	1207
80°	886	831	775
85°	553	661	772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.8	4.7
10°-20°	394.7	13.0
20°-30°	546.4	18.0
30°-40°	582.6	19.2
40°-50°	531.5	17.5
50°-60°	416.4	13.7
60°-70°	271.4	8.9
70°-80°	120.2	4.0
80°-90°	25.8	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°	1084.9	35.8
0°-40°	1667.6	55.0
0°-60°	2615.6	86.2
0°-90°	3033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1518	1516	1516	1515	1515	144
15°	1420	1420	1406	1391	1386	399
25°	1231	1224	1204	1161	1129	565
35°	998	991	943	872	850	624
45°	766	750	686	629	604	590
55°	532	516	468	413	391	477
65°	316	298	270	275	229	312
75°	127	118	111	105	116	136
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1545.0	1545.0	1545.0	1545.0	1545.0
2.5°	1534.3	1534.3	1534.3	1532.5	1532.5
5°	1518.2	1516.4	1516.4	1514.6	1514.6
7.5°	1505.7	1503.9	1502.1	1500.3	1496.7
10°	1487.8	1487.8	1486.0	1477.1	1475.3
12.5°	1459.2	1457.5	1450.3	1437.8	1434.2
15°	1419.9	1419.9	1405.7	1391.4	1386.0
17.5°	1377.1	1375.3	1357.4	1343.1	1336.0
20°	1330.6	1327.1	1309.2	1286.0	1273.5
22.5°	1278.8	1278.8	1257.4	1227.0	1214.5
25°	1230.6	1223.5	1203.8	1161.0	1128.8
27.5°	1175.2	1164.5	1143.1	1082.4	1044.9
30°	1114.5	1109.2	1078.8	1000.2	971.6
32.5°	1057.4	1048.4	1016.3	934.1	910.9
35°	998.4	991.3	943.1	871.6	850.2
37.5°	939.5	930.6	869.8	812.7	785.9
40°	880.5	869.8	803.7	751.9	723.4
42.5°	825.2	810.9	746.6	691.2	659.1
45°	766.2	750.2	685.9	628.7	603.7
47.5°	707.3	693.0	634.1	575.1	546.5
50°	644.8	632.3	578.7	519.8	489.4
52.5°	593.0	573.3	521.5	462.6	437.6
55°	532.3	516.2	468.0	412.6	391.2
57.5°	476.9	460.8	416.2	364.4	346.5
60°	425.1	401.9	364.4	319.7	305.4
62.5°	367.9	350.1	317.9	280.4	298.3
65°	316.1	298.3	269.7	275.1	228.6
67.5°	259.0	250.1	225.0	200.0	192.9
70°	210.8	200.0	191.1	164.3	157.2
72.5°	167.9	157.2	144.7	130.4	125.0
75°	126.8	117.9	110.7	105.4	116.1
77.5°	87.5	83.9	78.6	73.2	71.4
80°	57.2	55.4	53.6	51.8	50.0
82.5°	33.9	33.9	33.9	33.9	33.9
85°	17.9	19.6	21.4	23.2	25.0
87.5°	10.7	10.7	12.5	14.3	16.1
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)