

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: P546073

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-80-86-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: P546073
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-80-86-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

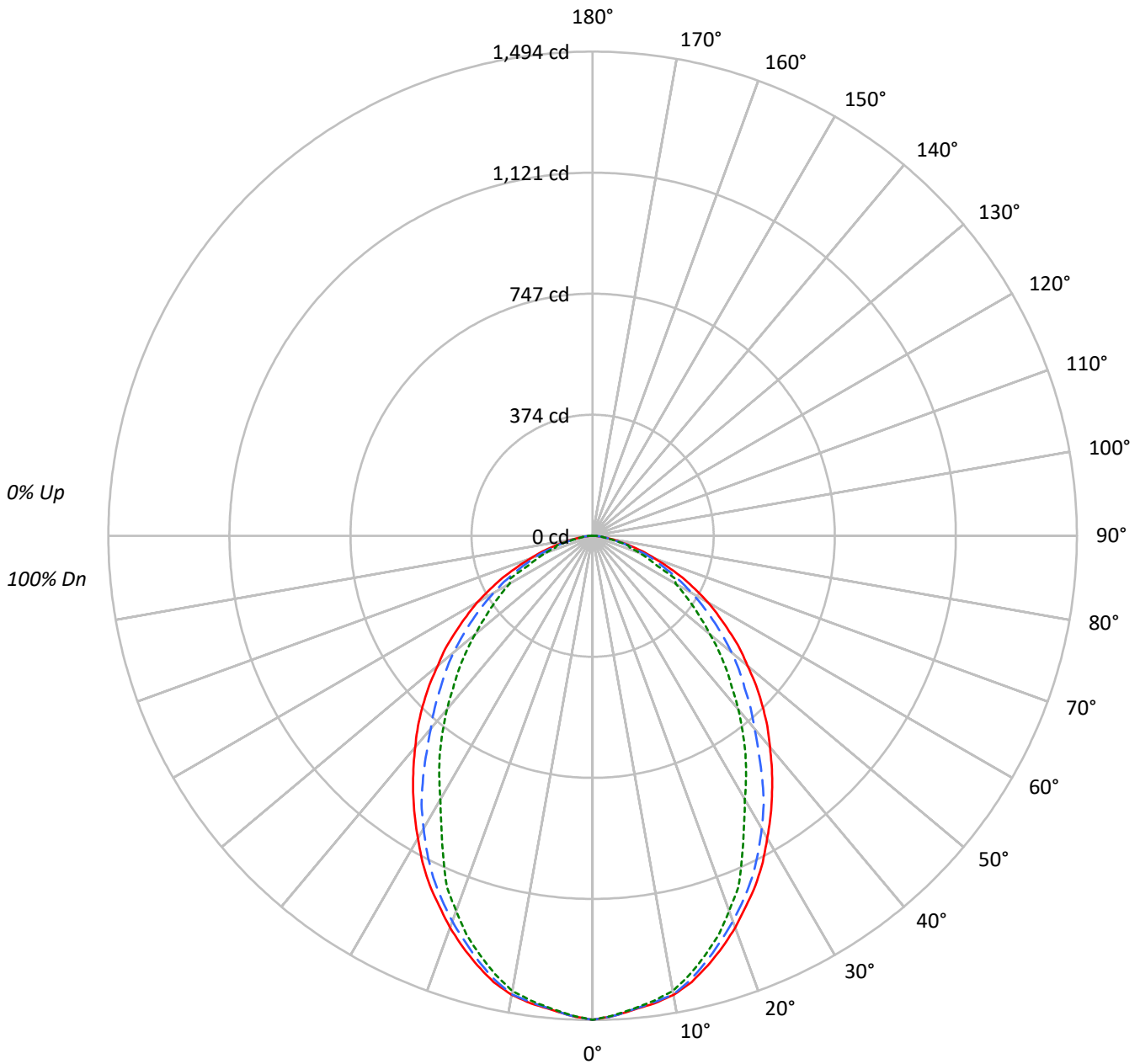
Lumens per Lamp: N/A
Luminaire Lumens: 2932.0 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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°	4019	4019	4019
5°	3964	3960	3955
10°	3930	3925	3897
15°	3824	3785	3733
20°	3684	3624	3525
25°	3532	3455	3240
30°	3348	3241	2919
35°	3171	2995	2700
40°	2990	2729	2457
45°	2819	2523	2221
50°	2609	2342	1981
55°	2414	2122	1774
60°	2211	1896	1589
65°	1946	1660	1407
70°	1603	1453	1195
75°	1275	1114	1167
80°	857	803	748
85°	534	639	747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.0	4.7
10°-20°	381.5	13.0
20°-30°	528.2	18.0
30°-40°	563.2	19.2
40°-50°	513.8	17.5
50°-60°	402.5	13.7
60°-70°	262.4	8.9
70°-80°	116.2	4.0
80°-90°	25.0	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°	1048.8	35.8
0°-40°	1612.0	55.0
0°-60°	2528.4	86.2
0°-90°	2932.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2932.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1468	1466	1466	1464	1464	139
15°	1373	1373	1359	1345	1340	386
25°	1190	1183	1164	1122	1091	546
35°	965	958	912	843	822	603
45°	741	725	663	608	584	571
55°	514	499	452	399	378	461
65°	306	288	261	266	221	301
75°	123	114	107	102	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1493.5	1493.5	1493.5	1493.5	1493.5
2.5°	1483.2	1483.2	1483.2	1481.4	1481.4
5°	1467.6	1465.9	1465.9	1464.2	1464.2
7.5°	1455.5	1453.8	1452.1	1450.4	1446.9
10°	1438.3	1438.3	1436.5	1427.9	1426.2
12.5°	1410.6	1408.9	1402.0	1389.9	1386.5
15°	1372.7	1372.7	1358.8	1345.0	1339.9
17.5°	1331.2	1329.5	1312.2	1298.4	1291.5
20°	1286.3	1282.9	1265.6	1243.2	1231.1
22.5°	1236.3	1236.3	1215.5	1186.2	1174.1
25°	1189.6	1182.7	1163.7	1122.3	1091.2
27.5°	1136.1	1125.8	1105.0	1046.3	1010.1
30°	1077.4	1072.2	1042.9	966.9	939.3
32.5°	1022.2	1013.5	982.4	903.0	880.6
35°	965.2	958.3	911.7	842.6	821.9
37.5°	908.2	899.6	840.9	785.6	759.7
40°	851.2	840.9	777.0	726.9	699.3
42.5°	797.7	783.9	721.7	668.2	637.1
45°	740.7	725.2	663.0	607.8	583.6
47.5°	683.7	669.9	612.9	556.0	528.3
50°	623.3	611.2	559.4	502.4	473.1
52.5°	573.2	554.2	504.2	447.2	423.0
55°	514.5	499.0	452.4	398.8	378.1
57.5°	461.0	445.5	402.3	352.2	335.0
60°	410.9	388.5	352.2	309.1	295.3
62.5°	355.7	338.4	307.3	271.1	288.3
65°	305.6	288.3	260.7	265.9	221.0
67.5°	250.4	241.7	217.6	193.4	186.5
70°	203.7	193.4	184.7	158.8	151.9
72.5°	162.3	151.9	139.9	126.0	120.9
75°	122.6	114.0	107.1	101.9	112.2
77.5°	84.6	81.2	76.0	70.8	69.1
80°	55.3	53.5	51.8	50.1	48.3
82.5°	32.8	32.8	32.8	32.8	32.8
85°	17.3	19.0	20.7	22.4	24.2
87.5°	10.4	10.4	12.1	13.8	15.5
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)