

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: P545738

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-82-87-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: P545738
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-12-2-LD4-2STD-35-UNV-82-87-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

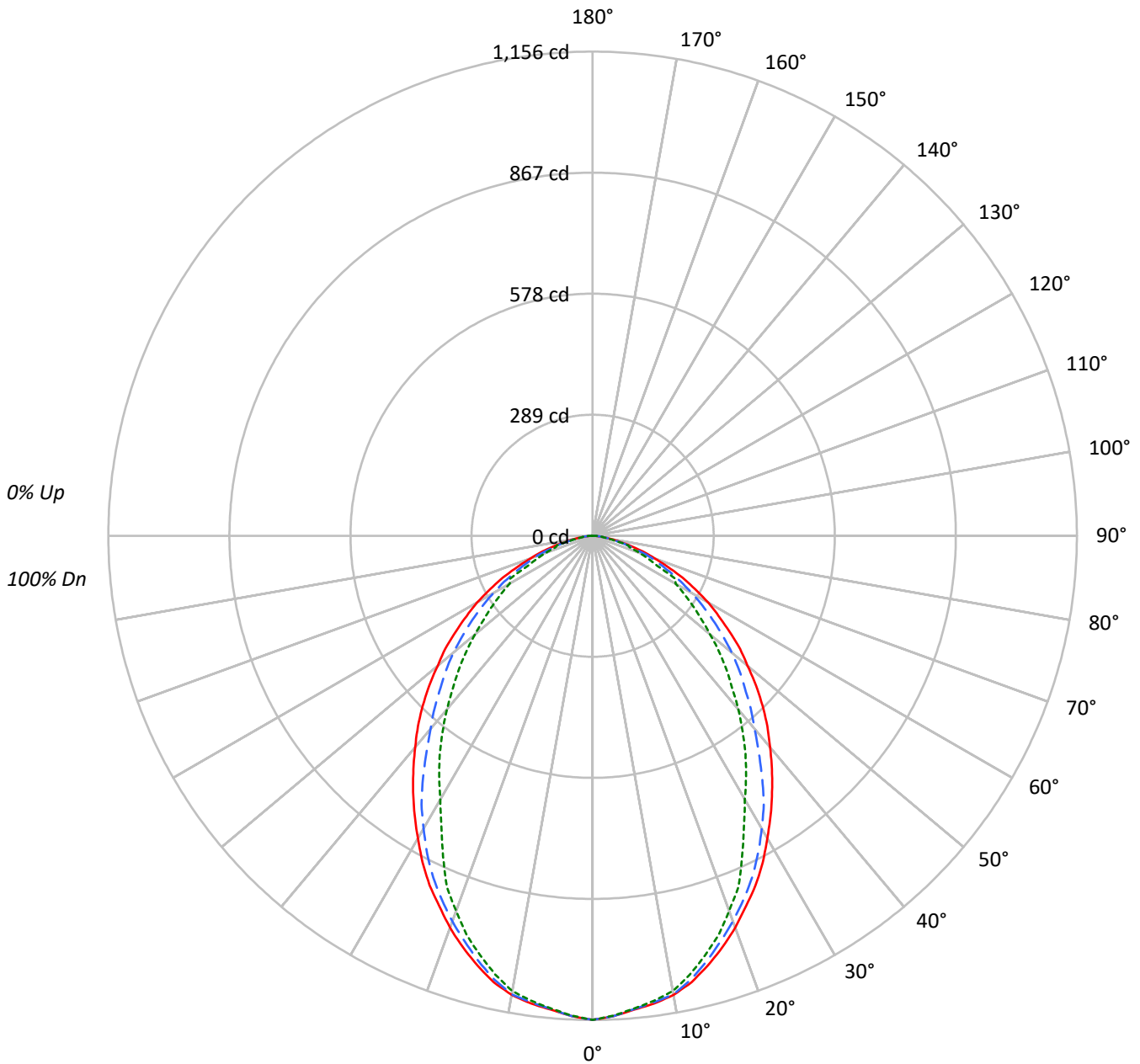
Lumens per Lamp: N/A
Luminaire Lumens: 2269.0 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	6220	6220	6220
5°	6136	6129	6122
10°	6083	6075	6032
15°	5919	5859	5777
20°	5702	5609	5456
25°	5467	5348	5015
30°	5182	5016	4517
35°	4907	4635	4179
40°	4628	4225	3802
45°	4363	3905	3437
50°	4039	3625	3065
55°	3736	3285	2746
60°	3423	2934	2460
65°	3012	2570	2178
70°	2482	2250	1851
75°	1973	1722	1807
80°	1327	1243	1159
85°	827	988	1155



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	4.7
10°-20°	295.3	13.0
20°-30°	408.8	18.0
30°-40°	435.9	19.2
40°-50°	397.6	17.5
50°-60°	311.5	13.7
60°-70°	203.0	8.9
70°-80°	89.9	4.0
80°-90°	19.3	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°	811.6	35.8
0°-40°	1247.5	55.0
0°-60°	1956.7	86.2
0°-90°	2269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1156	1156	1156	1156	1156	
5°	1136	1134	1134	1133	1133	108
15°	1062	1062	1052	1041	1037	299
25°	921	915	901	868	844	423
35°	747	742	706	652	636	467
45°	573	561	513	470	452	442
55°	398	386	350	309	293	357
65°	236	223	202	206	171	233
75°	95	88	83	79	87	102
85°	13	15	16	17	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1155.8	1155.8	1155.8	1155.8	1155.8
2.5°	1147.8	1147.8	1147.8	1146.4	1146.4
5°	1135.8	1134.4	1134.4	1133.1	1133.1
7.5°	1126.4	1125.1	1123.7	1122.4	1119.7
10°	1113.0	1113.0	1111.7	1105.0	1103.7
12.5°	1091.7	1090.3	1085.0	1075.6	1073.0
15°	1062.3	1062.3	1051.6	1040.9	1036.9
17.5°	1030.2	1028.9	1015.5	1004.8	999.5
20°	995.5	992.8	979.4	962.1	952.7
22.5°	956.7	956.7	940.7	918.0	908.6
25°	920.6	915.3	900.6	868.5	844.5
27.5°	879.2	871.2	855.2	809.7	781.7
30°	833.8	829.8	807.1	748.3	726.9
32.5°	791.0	784.3	760.3	698.8	681.5
35°	746.9	741.6	705.5	652.1	636.0
37.5°	702.8	696.2	650.7	608.0	587.9
40°	658.7	650.7	601.3	562.5	541.2
42.5°	617.3	606.6	558.5	517.1	493.1
45°	573.2	561.2	513.1	470.3	451.6
47.5°	529.1	518.4	474.3	430.3	408.9
50°	482.4	473.0	432.9	388.8	366.1
52.5°	443.6	428.9	390.2	346.1	327.4
55°	398.2	386.2	350.1	308.7	292.6
57.5°	356.8	344.7	311.3	272.6	259.2
60°	318.0	300.6	272.6	239.2	228.5
62.5°	275.3	261.9	237.8	209.8	223.1
65°	236.5	223.1	201.8	205.8	171.0
67.5°	193.7	187.1	168.4	149.7	144.3
70°	157.7	149.7	143.0	122.9	117.6
72.5°	125.6	117.6	108.2	97.5	93.5
75°	94.9	88.2	82.8	78.8	86.9
77.5°	65.5	62.8	58.8	54.8	53.4
80°	42.8	41.4	40.1	38.7	37.4
82.5°	25.4	25.4	25.4	25.4	25.4
85°	13.4	14.7	16.0	17.4	18.7
87.5°	8.0	8.0	9.4	10.7	12.0
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)