

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: P545542

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-81-97-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: P545542  
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-LD4-2HI-35-UNV-81-97-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

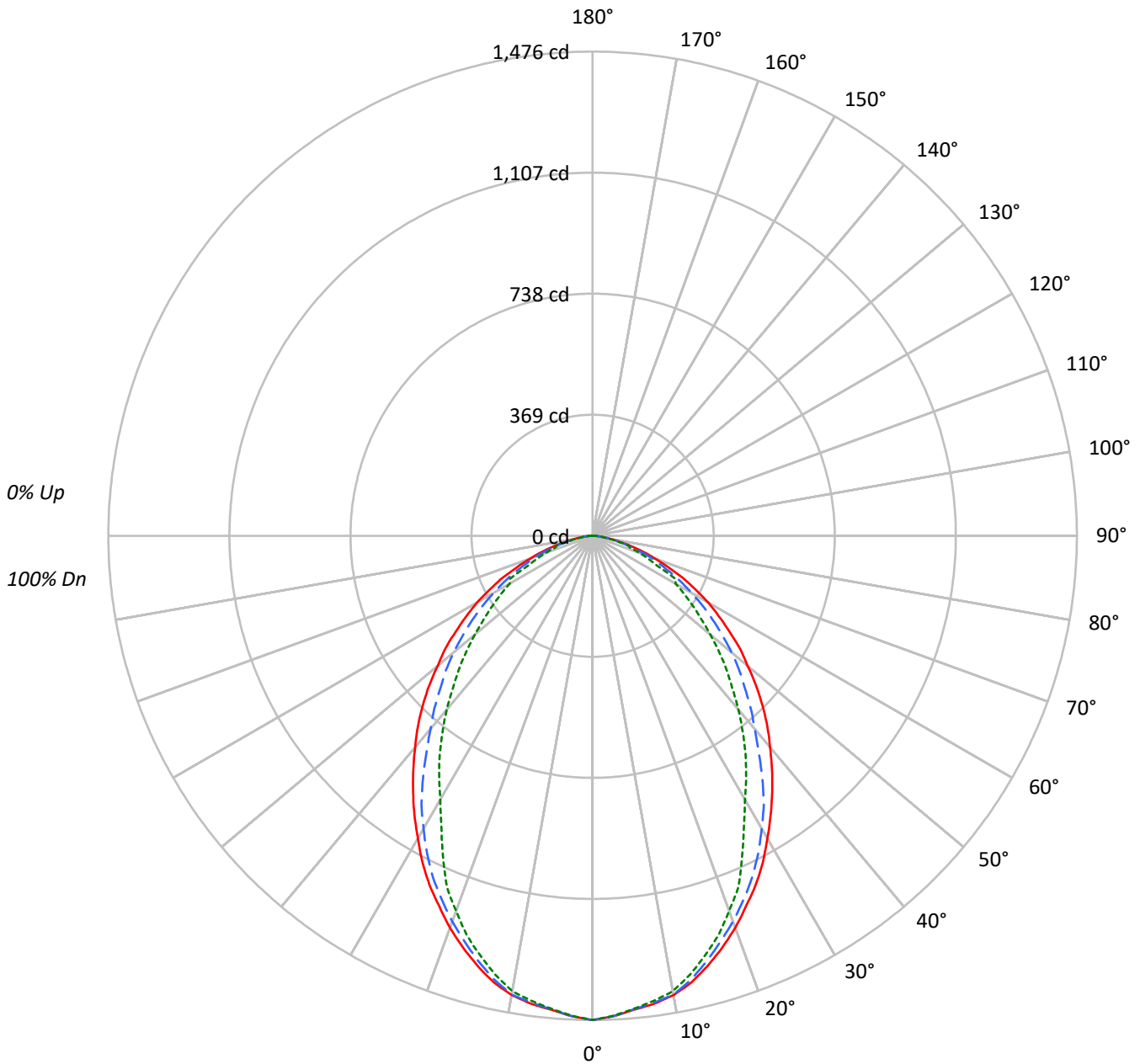
Lumens per Lamp: N/A  
Luminaire Lumens: 2898.0 lumens  
Efficiency: N/A  
Efficacy: 67.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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					20					
RC	80					70					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°	7945	7945	7945
5°	7837	7828	7819
10°	7769	7760	7703
15°	7559	7484	7379
20°	7282	7164	6969
25°	6982	6830	6405
30°	6618	6406	5770
35°	6268	5920	5337
40°	5911	5396	4856
45°	5572	4988	4390
50°	5159	4629	3915
55°	4772	4195	3506
60°	4372	3747	3141
65°	3847	3282	2781
70°	3169	2873	2364
75°	2520	2200	2306
80°	1692	1587	1481
85°	1056	1266	1476



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.4	4.7
10°-20°	377.1	13.0
20°-30°	522.1	18.0
30°-40°	556.7	19.2
40°-50°	507.9	17.5
50°-60°	397.9	13.7
60°-70°	259.3	8.9
70°-80°	114.9	4.0
80°-90°	24.7	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°	1036.6	35.8
0°-40°	1593.4	55.0
0°-60°	2499.1	86.2
0°-90°	2898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2898.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1476	1476	1476	1476	1476	
5°	1451	1449	1449	1447	1447	138
15°	1357	1357	1343	1329	1324	381
25°	1176	1169	1150	1109	1079	540
35°	954	947	901	833	812	596
45°	732	717	655	601	577	564
55°	509	493	447	394	374	456
65°	302	285	258	263	218	298
75°	121	113	106	101	111	130
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1476.2	1476.2	1476.2	1476.2	1476.2
2.5°	1466.0	1466.0	1466.0	1464.3	1464.3
5°	1450.6	1448.9	1448.9	1447.2	1447.2
7.5°	1438.7	1437.0	1435.2	1433.5	1430.1
10°	1421.6	1421.6	1419.9	1411.4	1409.6
12.5°	1394.3	1392.6	1385.8	1373.8	1370.4
15°	1356.7	1356.7	1343.1	1329.4	1324.3
17.5°	1315.8	1314.1	1297.0	1283.4	1276.5
20°	1271.4	1268.0	1250.9	1228.7	1216.8
22.5°	1221.9	1221.9	1201.4	1172.4	1160.5
25°	1175.8	1169.0	1150.2	1109.3	1078.6
27.5°	1122.9	1112.7	1092.2	1034.2	998.4
30°	1064.9	1059.8	1030.8	955.7	928.4
32.5°	1010.3	1001.8	971.1	892.5	870.4
35°	954.0	947.2	901.1	832.8	812.3
37.5°	897.7	889.1	831.1	776.5	750.9
40°	841.4	831.1	768.0	718.5	691.2
42.5°	788.4	774.8	713.4	660.5	629.7
45°	732.1	716.8	655.3	600.7	576.8
47.5°	675.8	662.2	605.8	549.5	522.2
50°	616.1	604.1	552.9	496.6	467.6
52.5°	566.6	547.8	498.3	442.0	418.1
55°	508.6	493.2	447.1	394.2	373.7
57.5°	455.7	440.3	397.6	348.1	331.1
60°	406.2	384.0	348.1	305.5	291.8
62.5°	351.6	334.5	303.8	267.9	285.0
65°	302.1	285.0	257.7	262.8	218.4
67.5°	247.5	238.9	215.0	191.1	184.3
70°	201.4	191.1	182.6	157.0	150.2
72.5°	160.4	150.2	138.2	124.6	119.5
75°	121.2	112.6	105.8	100.7	110.9
77.5°	83.6	80.2	75.1	70.0	68.3
80°	54.6	52.9	51.2	49.5	47.8
82.5°	32.4	32.4	32.4	32.4	32.4
85°	17.1	18.8	20.5	22.2	23.9
87.5°	10.2	10.2	11.9	13.7	15.4
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)