

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: P545251

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-81-88-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: P545251
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-LD4-1HI-35-UNV-81-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

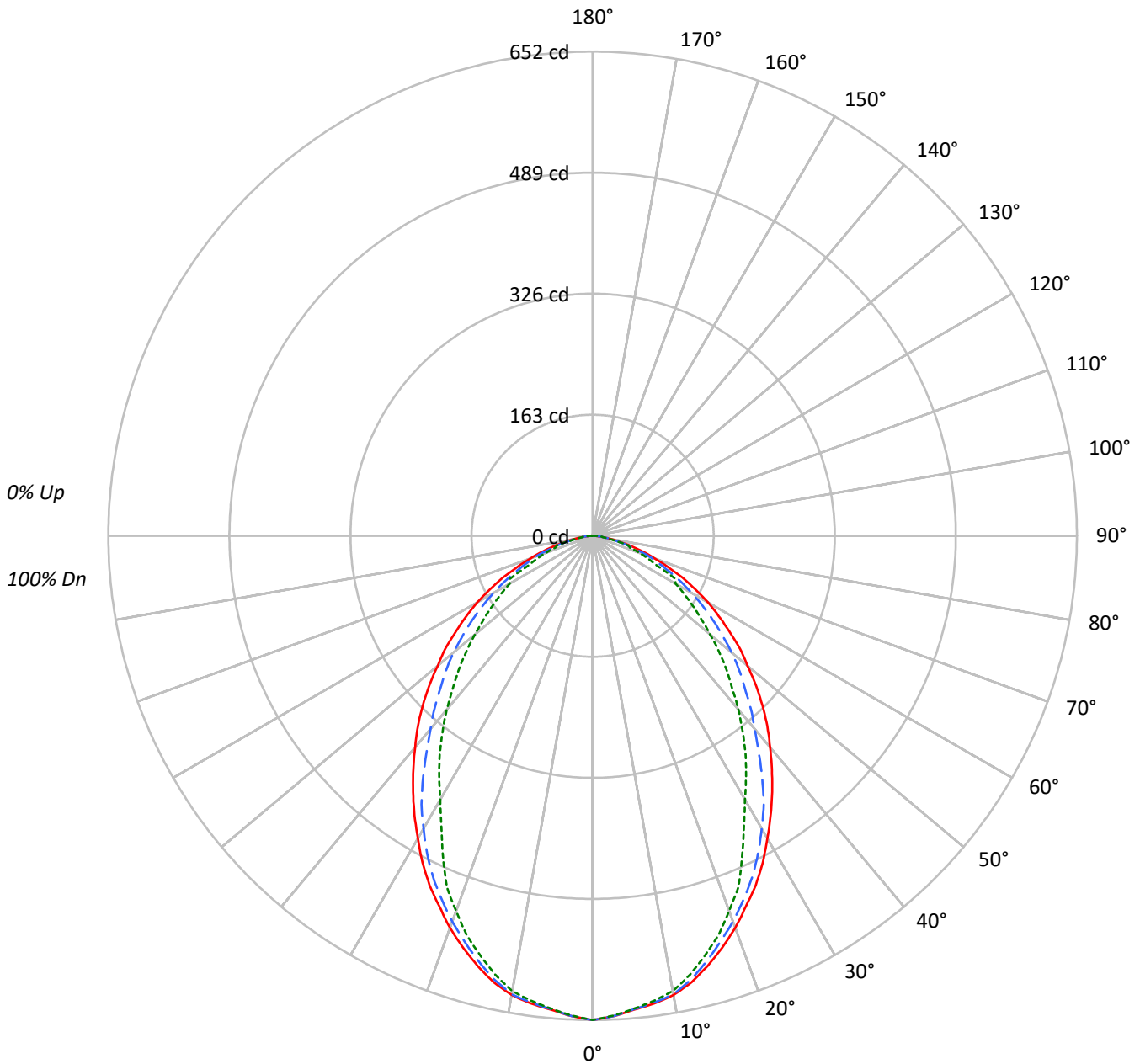
Lumens per Lamp: N/A
Luminaire Lumens: 1280.0 lumens
Efficiency: N/A
Efficacy: 59.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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

TEST NUMBER: P545251

CATALOG NUMBER: FMR-12-2-LD4-1HI-35-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545251

CATALOG NUMBER: FMR-12-2-LD4-1HI-35-UNV-81-88-EDD

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°	3509	3509	3509
5°	3461	3458	3453
10°	3431	3427	3402
15°	3339	3305	3259
20°	3216	3164	3078
25°	3084	3017	2829
30°	2923	2829	2549
35°	2769	2615	2357
40°	2611	2383	2145
45°	2461	2203	1939
50°	2278	2045	1729
55°	2107	1853	1549
60°	1931	1655	1387
65°	1699	1449	1229
70°	1399	1270	1043
75°	1112	971	1019
80°	747	700	654
85°	463	556	655



TEST NUMBER: P545251

CATALOG NUMBER: FMR-12-2-LD4-1HI-35-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.7	4.7
10°-20°	166.6	13.0
20°-30°	230.6	18.0
30°-40°	245.9	19.2
40°-50°	224.3	17.5
50°-60°	175.7	13.7
60°-70°	114.5	8.9
70°-80°	50.7	4.0
80°-90°	10.9	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°	457.9	35.8
0°-40°	703.8	55.0
0°-60°	1103.8	86.2
0°-90°	1280.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1280.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	652	652	652	652	652	
5°	641	640	640	639	639	61
15°	599	599	593	587	585	168
25°	519	516	508	490	476	238
35°	421	418	398	368	359	263
45°	323	317	289	265	255	249
55°	225	218	198	174	165	201
65°	133	126	114	116	96	131
75°	54	50	47	44	49	57
85°	8	8	9	10	11	10
90°	0	0	0	0	0	



TEST NUMBER: P545251

CATALOG NUMBER: FMR-12-2-LD4-1HI-35-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	652.0	652.0	652.0	652.0	652.0
2.5°	647.5	647.5	647.5	646.7	646.7
5°	640.7	640.0	640.0	639.2	639.2
7.5°	635.4	634.7	633.9	633.2	631.7
10°	627.9	627.9	627.1	623.4	622.6
12.5°	615.8	615.1	612.1	606.8	605.3
15°	599.3	599.3	593.2	587.2	584.9
17.5°	581.2	580.4	572.9	566.8	563.8
20°	561.6	560.1	552.5	542.7	537.4
22.5°	539.7	539.7	530.7	517.8	512.6
25°	519.4	516.3	508.0	490.0	476.4
27.5°	496.0	491.5	482.4	456.8	441.0
30°	470.4	468.1	455.3	422.1	410.1
32.5°	446.2	442.5	428.9	394.2	384.4
35°	421.4	418.3	398.0	367.8	358.8
37.5°	396.5	392.7	367.1	343.0	331.7
40°	371.6	367.1	339.2	317.3	305.3
42.5°	348.2	342.2	315.1	291.7	278.1
45°	323.4	316.6	289.4	265.3	254.8
47.5°	298.5	292.5	267.6	242.7	230.7
50°	272.1	266.8	244.2	219.3	206.5
52.5°	250.3	242.0	220.1	195.2	184.7
55°	224.6	217.8	197.5	174.1	165.1
57.5°	201.3	194.5	175.6	153.8	146.2
60°	179.4	169.6	153.8	134.9	128.9
62.5°	155.3	147.7	134.2	118.3	125.9
65°	133.4	125.9	113.8	116.1	96.5
67.5°	109.3	105.5	95.0	84.4	81.4
70°	88.9	84.4	80.7	69.3	66.3
72.5°	70.9	66.3	61.1	55.0	52.8
75°	53.5	49.7	46.7	44.5	49.0
77.5°	36.9	35.4	33.2	30.9	30.2
80°	24.1	23.4	22.6	21.9	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.0	9.8	10.6
87.5°	4.5	4.5	5.3	6.0	6.8
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)