

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: P545285

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-81-96-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: P545285
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-40-UNV-81-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

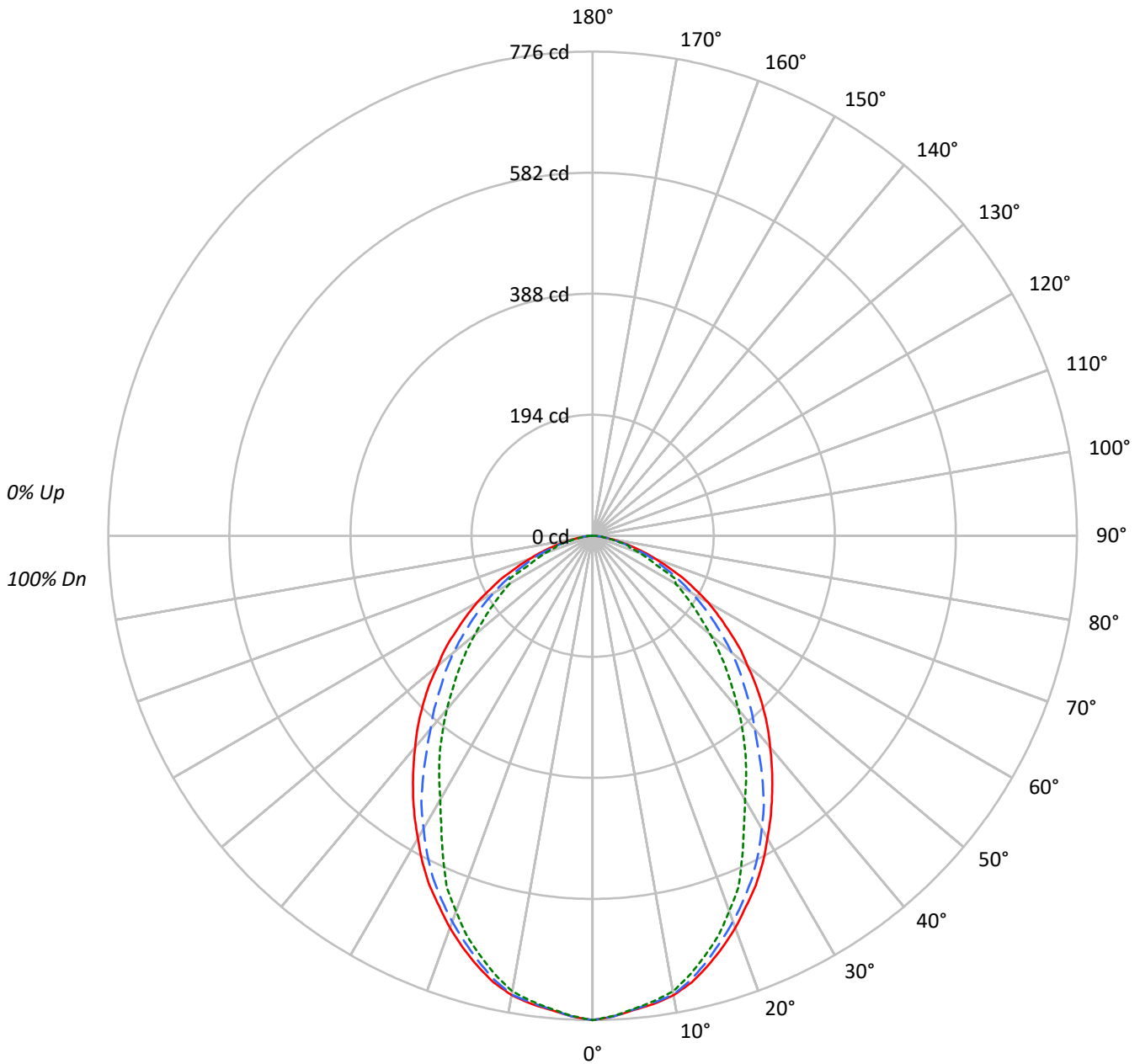
Lumens per Lamp: N/A
Luminaire Lumens: 1524.0 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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: P545285

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545285

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-96-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°	4178	4178	4178
5°	4121	4116	4111
10°	4086	4081	4051
15°	3975	3935	3880
20°	3829	3767	3665
25°	3672	3592	3368
30°	3480	3369	3034
35°	3296	3114	2807
40°	3108	2838	2554
45°	2930	2623	2308
50°	2713	2435	2059
55°	2509	2206	1844
60°	2299	1971	1652
65°	2024	1726	1463
70°	1666	1511	1243
75°	1325	1156	1212
80°	890	834	778
85°	556	667	778



TEST NUMBER: P545285

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	4.7
10°-20°	198.3	13.0
20°-30°	274.6	18.0
30°-40°	292.8	19.2
40°-50°	267.1	17.5
50°-60°	209.2	13.7
60°-70°	136.4	8.9
70°-80°	60.4	4.0
80°-90°	13.0	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°	545.2	35.8
0°-40°	837.9	55.0
0°-60°	1314.2	86.2
0°-90°	1524.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1524.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	763	762	762	761	761	72
15°	714	714	706	699	696	201
25°	618	615	605	583	567	284
35°	502	498	474	438	427	314
45°	385	377	345	316	303	297
55°	267	259	235	207	196	240
65°	159	150	136	138	115	157
75°	64	59	56	53	58	68
85°	9	10	11	12	13	12
90°	0	0	0	0	0	



TEST NUMBER: P545285

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	776.3	776.3	776.3	776.3	776.3
2.5°	770.9	770.9	770.9	770.0	770.0
5°	762.8	761.9	761.9	761.0	761.0
7.5°	756.6	755.7	754.8	753.9	752.1
10°	747.6	747.6	746.7	742.2	741.3
12.5°	733.2	732.3	728.7	722.5	720.7
15°	713.5	713.5	706.3	699.1	696.4
17.5°	691.9	691.0	682.1	674.9	671.3
20°	668.6	666.8	657.8	646.2	639.9
22.5°	642.6	642.6	631.8	616.6	610.3
25°	618.4	614.8	604.9	583.4	567.2
27.5°	590.5	585.1	574.4	543.9	525.0
30°	560.0	557.3	542.1	502.6	488.2
32.5°	531.3	526.8	510.7	469.4	457.7
35°	501.7	498.1	473.9	438.0	427.2
37.5°	472.1	467.6	437.1	408.3	394.9
40°	442.4	437.1	403.9	377.8	363.5
42.5°	414.6	407.4	375.1	347.3	331.2
45°	385.0	376.9	344.6	315.9	303.3
47.5°	355.4	348.2	318.6	289.0	274.6
50°	324.0	317.7	290.8	261.2	245.9
52.5°	298.0	288.1	262.1	232.4	219.9
55°	267.4	259.4	235.1	207.3	196.5
57.5°	239.6	231.5	209.1	183.1	174.1
60°	213.6	201.9	183.1	160.6	153.5
62.5°	184.9	175.9	159.7	140.9	149.9
65°	158.9	149.9	135.5	138.2	114.9
67.5°	130.1	125.6	113.1	100.5	96.9
70°	105.9	100.5	96.0	82.6	79.0
72.5°	84.4	79.0	72.7	65.5	62.8
75°	63.7	59.2	55.6	53.0	58.3
77.5°	44.0	42.2	39.5	36.8	35.9
80°	28.7	27.8	26.9	26.0	25.1
82.5°	17.1	17.1	17.1	17.1	17.1
85°	9.0	9.9	10.8	11.7	12.6
87.5°	5.4	5.4	6.3	7.2	8.1
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)