

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: P545476

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-81-94-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: P545476
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-LD4-1STD-40-UNV-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

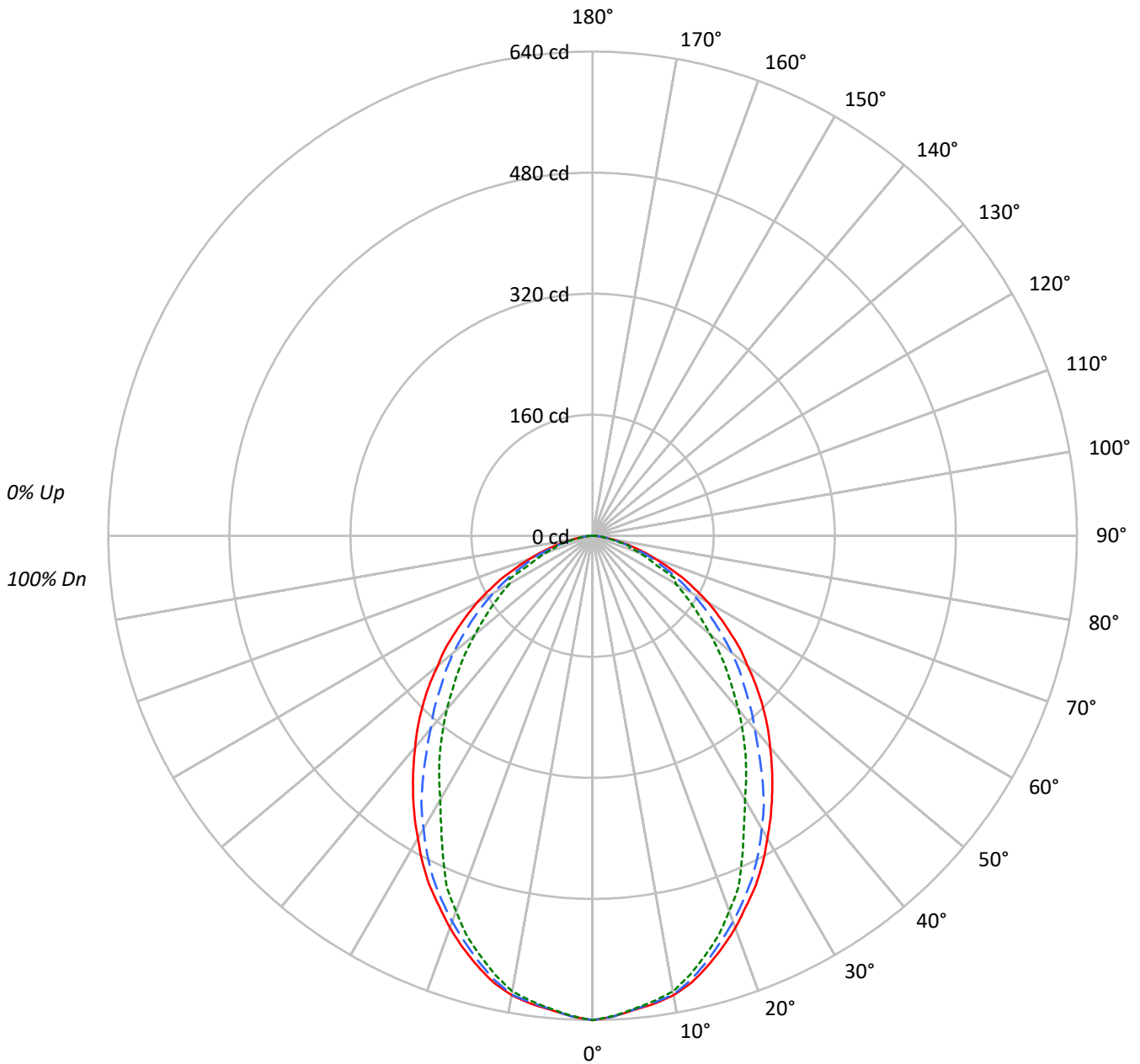
Lumens per Lamp: N/A
Luminaire Lumens: 1257.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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: P545476

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-81-94-EDD

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°	3446	3446	3446
5°	3399	3395	3391
10°	3370	3366	3341
15°	3279	3246	3200
20°	3159	3108	3023
25°	3029	2963	2778
30°	2871	2779	2503
35°	2719	2568	2315
40°	2564	2340	2106
45°	2417	2163	1904
50°	2237	2008	1698
55°	2070	1819	1521
60°	1897	1625	1363
65°	1668	1424	1206
70°	1374	1246	1024
75°	1094	954	1000
80°	735	688	642
85°	457	550	642



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.6	4.7
10°-20°	163.6	13.0
20°-30°	226.5	18.0
30°-40°	241.5	19.2
40°-50°	220.3	17.5
50°-60°	172.6	13.7
60°-70°	112.5	8.9
70°-80°	49.8	4.0
80°-90°	10.7	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°	449.6	35.8
0°-40°	691.1	55.0
0°-60°	1084.0	86.2
0°-90°	1257.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1257.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	629	628	628	628	628	60
15°	588	588	583	577	574	165
25°	510	507	499	481	468	234
35°	414	411	391	361	352	259
45°	318	311	284	261	250	245
55°	221	214	194	171	162	198
65°	131	124	112	114	95	129
75°	53	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	640.3	640.3	640.3	640.3	640.3
2.5°	635.9	635.9	635.9	635.1	635.1
5°	629.2	628.5	628.5	627.7	627.7
7.5°	624.0	623.3	622.5	621.8	620.3
10°	616.6	616.6	615.9	612.2	611.4
12.5°	604.8	604.0	601.1	595.9	594.4
15°	588.5	588.5	582.6	576.6	574.4
17.5°	570.7	570.0	562.6	556.7	553.7
20°	551.5	550.0	542.6	533.0	527.8
22.5°	530.0	530.0	521.1	508.5	503.4
25°	510.0	507.1	498.9	481.1	467.8
27.5°	487.1	482.6	473.7	448.6	433.0
30°	461.9	459.7	447.1	414.5	402.7
32.5°	438.2	434.5	421.2	387.1	377.5
35°	413.8	410.8	390.8	361.2	352.3
37.5°	389.4	385.7	360.5	336.8	325.7
40°	364.9	360.5	333.1	311.6	299.8
42.5°	342.0	336.1	309.4	286.5	273.1
45°	317.6	310.9	284.2	260.6	250.2
47.5°	293.1	287.2	262.8	238.4	226.5
50°	267.2	262.0	239.8	215.4	202.8
52.5°	245.8	237.6	216.1	191.7	181.4
55°	220.6	213.9	193.9	171.0	162.1
57.5°	197.6	191.0	172.5	151.0	143.6
60°	176.2	166.6	151.0	132.5	126.6
62.5°	152.5	145.1	131.8	116.2	123.6
65°	131.0	123.6	111.8	114.0	94.7
67.5°	107.3	103.6	93.3	82.9	79.9
70°	87.3	82.9	79.2	68.1	65.1
72.5°	69.6	65.1	60.0	54.0	51.8
75°	52.6	48.9	45.9	43.7	48.1
77.5°	36.3	34.8	32.6	30.3	29.6
80°	23.7	22.9	22.2	21.5	20.7
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.1	8.9	9.6	10.4
87.5°	4.4	4.4	5.2	5.9	6.7
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)