

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: P544895

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-81-84-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: P544895
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-12-1-LD4-1STD-40-UNV-81-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

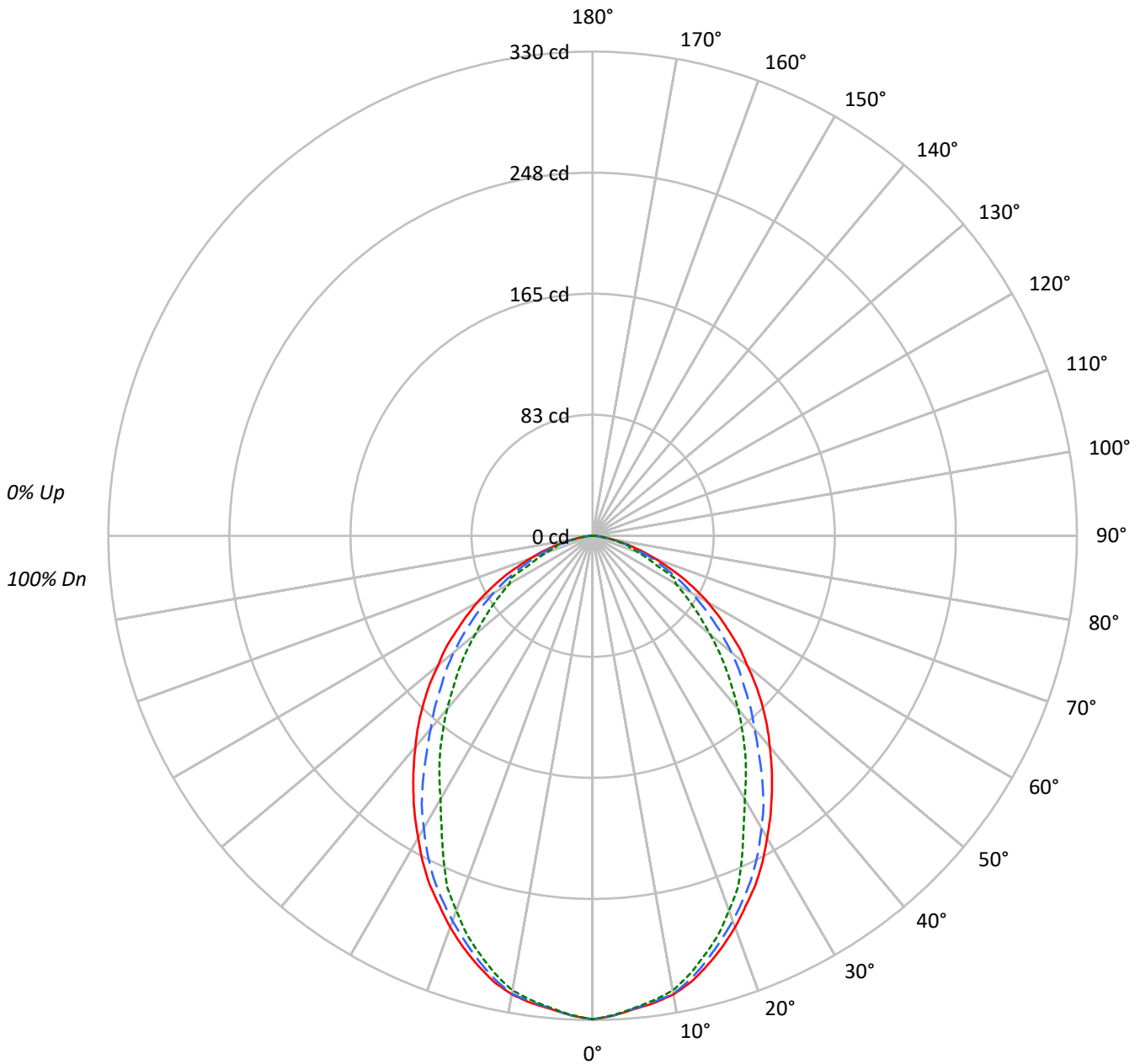
Lumens per Lamp: N/A
Luminaire Lumens: 647.0 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
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°	3548	3548	3548
5°	3500	3495	3491
10°	3469	3465	3440
15°	3375	3342	3295
20°	3252	3199	3112
25°	3118	3050	2860
30°	2954	2860	2577
35°	2799	2644	2384
40°	2639	2410	2168
45°	2489	2227	1961
50°	2303	2066	1748
55°	2130	1873	1565
60°	1953	1673	1404
65°	1717	1465	1243
70°	1416	1284	1054
75°	1127	981	1031
80°	756	707	663
85°	469	568	655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.7	4.7
10°-20°	84.2	13.0
20°-30°	116.6	18.0
30°-40°	124.3	19.2
40°-50°	113.4	17.5
50°-60°	88.8	13.7
60°-70°	57.9	8.9
70°-80°	25.7	4.0
80°-90°	5.5	0.8
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°	231.4	35.8
0°-40°	355.7	55.0
0°-60°	558.0	86.2
0°-90°	647.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	330	330	330	330	330	
5°	324	324	324	323	323	31
15°	303	303	300	297	296	85
25°	262	261	257	248	241	121
35°	213	212	201	186	181	133
45°	164	160	146	134	129	126
55°	114	110	100	88	83	102
65°	67	64	58	59	49	66
75°	27	25	24	22	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	329.6	329.6	329.6	329.6	329.6
2.5°	327.3	327.3	327.3	326.9	326.9
5°	323.9	323.5	323.5	323.1	323.1
7.5°	321.2	320.8	320.4	320.0	319.3
10°	317.4	317.4	317.0	315.1	314.7
12.5°	311.3	310.9	309.4	306.7	306.0
15°	302.9	302.9	299.9	296.8	295.7
17.5°	293.8	293.4	289.6	286.5	285.0
20°	283.9	283.1	279.3	274.3	271.7
22.5°	272.8	272.8	268.2	261.8	259.1
25°	262.5	261.0	256.8	247.7	240.8
27.5°	250.7	248.4	243.8	230.9	222.9
30°	237.7	236.6	230.1	213.4	207.3
32.5°	225.6	223.7	216.8	199.3	194.3
35°	213.0	211.5	201.2	185.9	181.4
37.5°	200.4	198.5	185.6	173.4	167.6
40°	187.8	185.6	171.5	160.4	154.3
42.5°	176.0	173.0	159.3	147.5	140.6
45°	163.5	160.0	146.3	134.1	128.8
47.5°	150.9	147.8	135.3	122.7	116.6
50°	137.5	134.9	123.4	110.9	104.4
52.5°	126.5	122.3	111.3	98.7	93.3
55°	113.5	110.1	99.8	88.0	83.4
57.5°	101.7	98.3	88.8	77.7	73.9
60°	90.7	85.7	77.7	68.2	65.2
62.5°	78.5	74.7	67.8	59.8	63.6
65°	67.4	63.6	57.5	58.7	48.8
67.5°	55.2	53.3	48.0	42.7	41.1
70°	45.0	42.7	40.8	35.1	33.5
72.5°	35.8	33.5	30.9	27.8	26.7
75°	27.1	25.1	23.6	22.5	24.8
77.5°	18.7	17.9	16.8	15.6	15.2
80°	12.2	11.8	11.4	11.0	10.7
82.5°	7.2	7.2	7.2	7.2	7.2
85°	3.8	4.2	4.6	5.0	5.3
87.5°	2.3	2.3	2.7	3.0	3.4
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)