

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: P544863

Luminaire Tested: **FMR-12-1-LD4-1STD-35-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: P544863
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

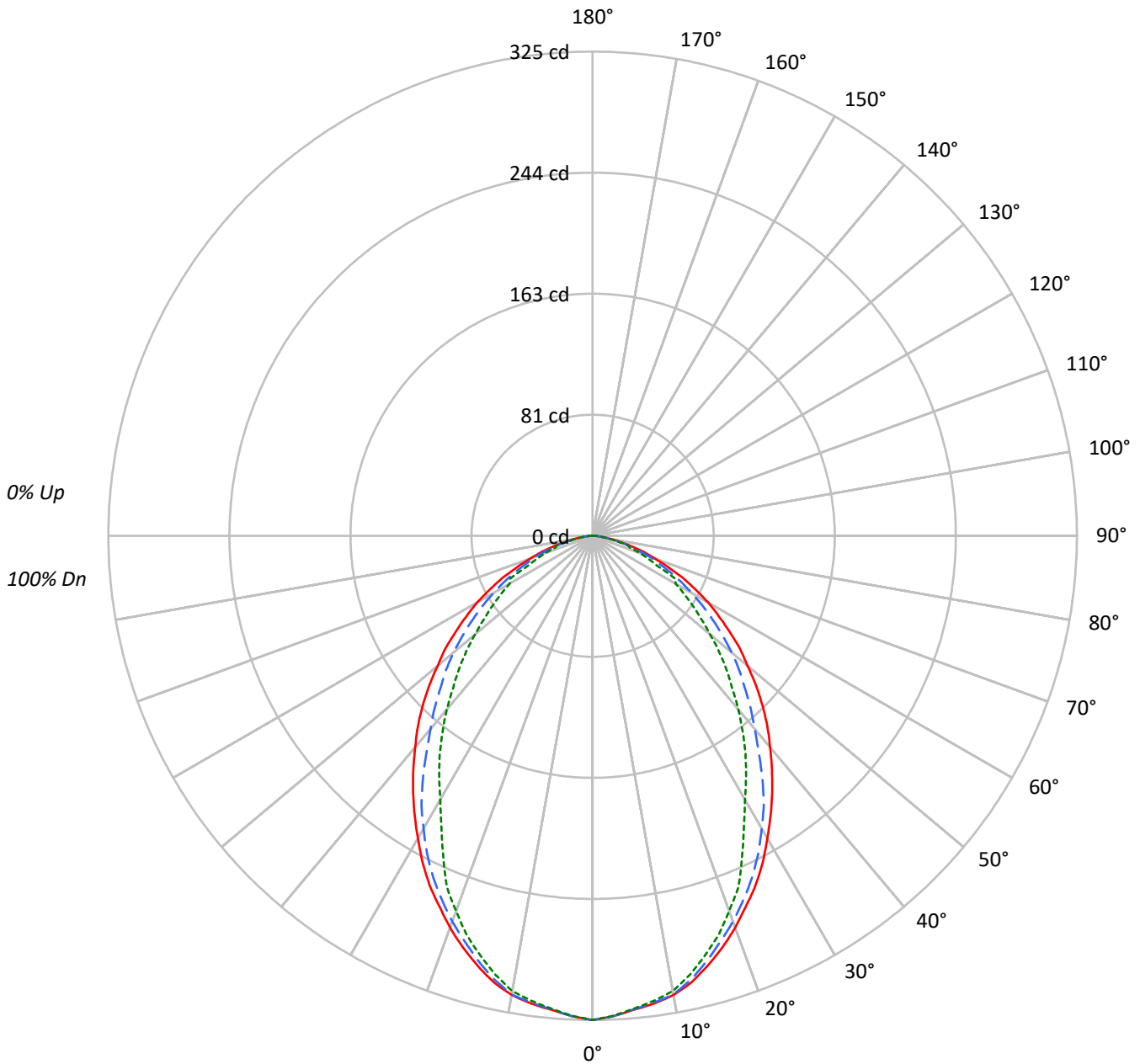
Lumens per Lamp: N/A
Luminaire Lumens: 638.0 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	3498	3498	3498
5°	3451	3447	3442
10°	3421	3417	3392
15°	3329	3295	3249
20°	3206	3155	3069
25°	3075	3007	2820
30°	2913	2820	2541
35°	2759	2607	2349
40°	2602	2376	2139
45°	2454	2197	1933
50°	2271	2038	1723
55°	2102	1847	1544
60°	1925	1649	1382
65°	1694	1444	1225
70°	1394	1265	1042
75°	1110	969	1015
80°	744	700	651
85°	469	556	655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.3	4.7
10°-20°	83.0	13.0
20°-30°	114.9	18.0
30°-40°	122.6	19.2
40°-50°	111.8	17.5
50°-60°	87.6	13.7
60°-70°	57.1	8.9
70°-80°	25.3	4.0
80°-90°	5.4	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°	228.2	35.8
0°-40°	350.8	55.0
0°-60°	550.2	86.2
0°-90°	638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	638.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	325	325	325	325	325	
5°	319	319	319	319	319	30
15°	299	299	296	293	292	84
25°	259	257	253	244	237	119
35°	210	208	198	183	179	131
45°	161	158	144	132	127	124
55°	112	109	98	87	82	100
65°	66	63	57	58	48	66
75°	27	25	23	22	24	29
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	325.0	325.0	325.0	325.0	325.0
2.5°	322.7	322.7	322.7	322.4	322.4
5°	319.4	319.0	319.0	318.6	318.6
7.5°	316.7	316.3	316.0	315.6	314.8
10°	313.0	313.0	312.6	310.7	310.3
12.5°	307.0	306.6	305.1	302.4	301.7
15°	298.7	298.7	295.7	292.7	291.6
17.5°	289.7	289.3	285.5	282.5	281.0
20°	279.9	279.2	275.4	270.5	267.9
22.5°	269.0	269.0	264.5	258.1	255.5
25°	258.9	257.4	253.2	244.2	237.4
27.5°	247.2	245.0	240.5	227.7	219.8
30°	234.4	233.3	226.9	210.4	204.4
32.5°	222.4	220.5	213.8	196.5	191.6
35°	210.0	208.5	198.4	183.3	178.8
37.5°	197.6	195.7	183.0	170.9	165.3
40°	185.2	183.0	169.1	158.2	152.2
42.5°	173.6	170.6	157.0	145.4	138.6
45°	161.2	157.8	144.3	132.2	127.0
47.5°	148.8	145.8	133.4	121.0	115.0
50°	135.6	133.0	121.7	109.3	102.9
52.5°	124.7	120.6	109.7	97.3	92.0
55°	112.0	108.6	98.4	86.8	82.3
57.5°	100.3	96.9	87.5	76.6	72.9
60°	89.4	84.5	76.6	67.3	64.2
62.5°	77.4	73.6	66.9	59.0	62.7
65°	66.5	62.7	56.7	57.9	48.1
67.5°	54.5	52.6	47.3	42.1	40.6
70°	44.3	42.1	40.2	34.6	33.1
72.5°	35.3	33.1	30.4	27.4	26.3
75°	26.7	24.8	23.3	22.2	24.4
77.5°	18.4	17.7	16.5	15.4	15.0
80°	12.0	11.6	11.3	10.9	10.5
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.8	4.1	4.5	4.9	5.3
87.5°	2.3	2.3	2.6	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)