

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: P544903

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-82-84-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: P544903
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-82-84-EDD
Description: 1X1 FMR TROFFER WITH .187 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

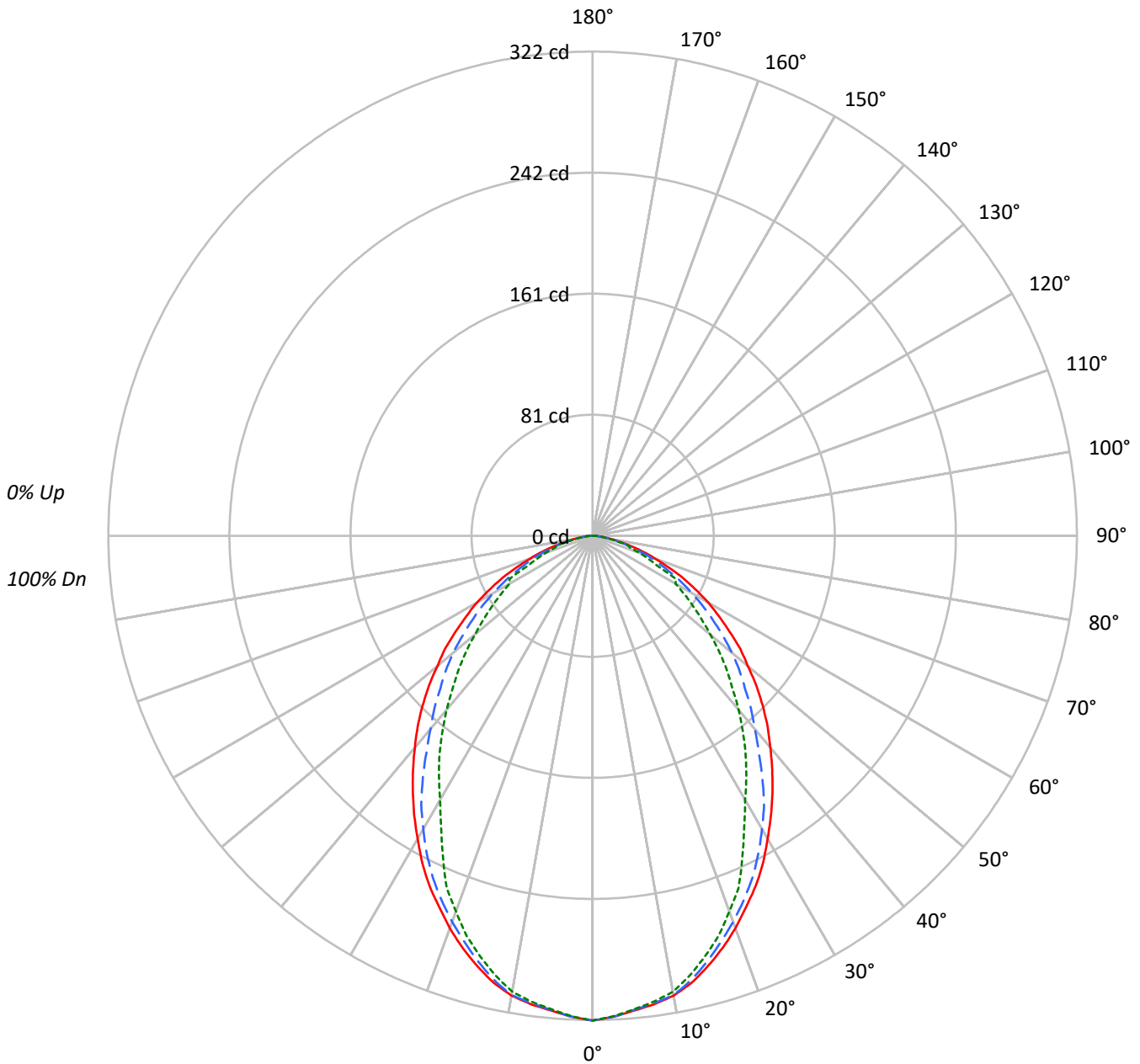
Lumens per Lamp: N/A
Luminaire Lumens: 633.0 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	3470	3470	3470
5°	3424	3420	3415
10°	3394	3389	3365
15°	3302	3270	3224
20°	3181	3129	3045
25°	3050	2983	2798
30°	2891	2799	2521
35°	2738	2586	2331
40°	2583	2356	2122
45°	2434	2178	1918
50°	2254	2023	1710
55°	2085	1833	1531
60°	1910	1636	1371
65°	1681	1434	1215
70°	1385	1256	1032
75°	1102	961	1006
80°	738	694	645
85°	457	556	642



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.0	4.7
10°-20°	82.4	13.0
20°-30°	114.0	18.0
30°-40°	121.6	19.2
40°-50°	110.9	17.5
50°-60°	86.9	13.7
60°-70°	56.7	8.9
70°-80°	25.1	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°	226.4	35.8
0°-40°	348.0	55.0
0°-60°	545.9	86.2
0°-90°	633.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	633.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	322	322	322	322	322	
5°	317	316	316	316	316	30
15°	296	296	293	290	289	83
25°	257	255	251	242	236	118
35°	208	207	197	182	177	130
45°	160	157	143	131	126	123
55°	111	108	98	86	82	100
65°	66	62	56	57	48	65
75°	26	25	23	22	24	28
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°	322.4	322.4	322.4	322.4	322.4
2.5°	320.2	320.2	320.2	319.8	319.8
5°	316.9	316.5	316.5	316.1	316.1
7.5°	314.2	313.9	313.5	313.1	312.4
10°	310.5	310.5	310.1	308.3	307.9
12.5°	304.5	304.2	302.7	300.1	299.3
15°	296.3	296.3	293.4	290.4	289.3
17.5°	287.4	287.0	283.3	280.3	278.8
20°	277.7	277.0	273.2	268.4	265.8
22.5°	266.9	266.9	262.4	256.1	253.5
25°	256.8	255.3	251.2	242.3	235.6
27.5°	245.3	243.0	238.6	225.9	218.1
30°	232.6	231.5	225.2	208.7	202.8
32.5°	220.7	218.8	212.1	195.0	190.1
35°	208.4	206.9	196.8	181.9	177.4
37.5°	196.1	194.2	181.5	169.6	164.0
40°	183.8	181.5	167.7	156.9	151.0
42.5°	172.2	169.2	155.8	144.3	137.6
45°	159.9	156.6	143.1	131.2	126.0
47.5°	147.6	144.6	132.3	120.0	114.1
50°	134.6	132.0	120.8	108.5	102.1
52.5°	123.8	119.7	108.8	96.5	91.3
55°	111.1	107.7	97.7	86.1	81.6
57.5°	99.5	96.2	86.9	76.0	72.3
60°	88.7	83.9	76.0	66.7	63.7
62.5°	76.8	73.1	66.4	58.5	62.3
65°	66.0	62.3	56.3	57.4	47.7
67.5°	54.1	52.2	47.0	41.7	40.3
70°	44.0	41.7	39.9	34.3	32.8
72.5°	35.0	32.8	30.2	27.2	26.1
75°	26.5	24.6	23.1	22.0	24.2
77.5°	18.3	17.5	16.4	15.3	14.9
80°	11.9	11.6	11.2	10.8	10.4
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.7	4.1	4.5	4.8	5.2
87.5°	2.2	2.2	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)