

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: P544970

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-82-87-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: P544970
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-LD4-2HI-35-UNV-82-87-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

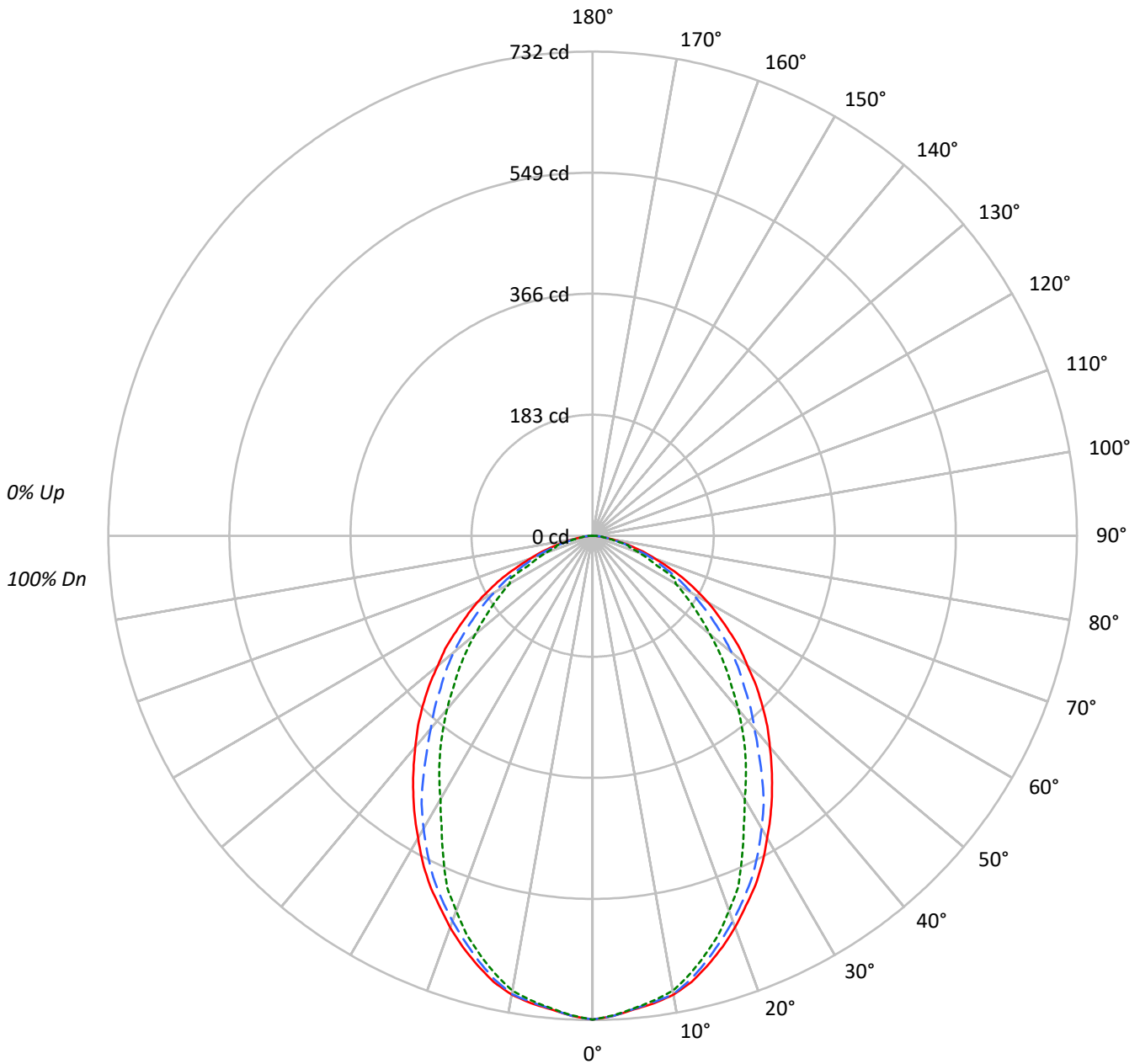
Lumens per Lamp: N/A
Luminaire Lumens: 1436.0 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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				20				
RC	80				70				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°	7874	7874	7874
5°	7767	7757	7748
10°	7699	7690	7635
15°	7492	7416	7312
20°	7216	7101	6906
25°	6919	6770	6347
30°	6559	6349	5717
35°	6211	5867	5289
40°	5858	5347	4813
45°	5523	4943	4351
50°	5112	4588	3880
55°	4729	4159	3476
60°	4334	3714	3113
65°	3813	3252	2756
70°	3141	2848	2341
75°	2495	2179	2287
80°	1680	1574	1469
85°	1050	1247	1457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	4.7
10°-20°	186.9	13.0
20°-30°	258.7	18.0
30°-40°	275.9	19.2
40°-50°	251.7	17.5
50°-60°	197.2	13.7
60°-70°	128.5	8.9
70°-80°	56.9	4.0
80°-90°	12.2	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°	513.7	35.8
0°-40°	789.5	55.0
0°-60°	1238.4	86.2
0°-90°	1436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1436.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	719	718	718	717	717	68
15°	672	672	666	659	656	189
25°	583	579	570	550	534	267
35°	473	469	446	413	402	296
45°	363	355	325	298	286	279
55°	252	244	222	195	185	226
65°	150	141	128	130	108	148
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	731.5	731.5	731.5	731.5	731.5
2.5°	726.4	726.4	726.4	725.6	725.6
5°	718.8	717.9	717.9	717.1	717.1
7.5°	712.9	712.0	711.2	710.3	708.6
10°	704.4	704.4	703.6	699.3	698.5
12.5°	690.9	690.0	686.7	680.7	679.0
15°	672.3	672.3	665.5	658.8	656.2
17.5°	652.0	651.1	642.7	635.9	632.5
20°	630.0	628.3	619.9	608.9	602.9
22.5°	605.5	605.5	595.3	581.0	575.0
25°	582.6	579.3	570.0	549.7	534.4
27.5°	556.4	551.4	541.2	512.5	494.7
30°	527.7	525.1	510.8	473.6	460.0
32.5°	500.6	496.4	481.2	442.3	431.3
35°	472.7	469.3	446.5	412.7	402.5
37.5°	444.8	440.6	411.8	384.8	372.1
40°	416.9	411.8	380.5	356.0	342.5
42.5°	390.7	383.9	353.5	327.3	312.0
45°	362.8	355.2	324.7	297.7	285.8
47.5°	334.9	328.1	300.2	272.3	258.8
50°	305.3	299.4	274.0	246.1	231.7
52.5°	280.8	271.5	246.9	219.0	207.2
55°	252.0	244.4	221.6	195.3	185.2
57.5°	225.8	218.2	197.0	172.5	164.1
60°	201.3	190.3	172.5	151.4	144.6
62.5°	174.2	165.7	150.5	132.8	141.2
65°	149.7	141.2	127.7	130.2	108.2
67.5°	122.6	118.4	106.6	94.7	91.3
70°	99.8	94.7	90.5	77.8	74.4
72.5°	79.5	74.4	68.5	61.7	59.2
75°	60.0	55.8	52.4	49.9	55.0
77.5°	41.4	39.7	37.2	34.7	33.8
80°	27.1	26.2	25.4	24.5	23.7
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.1	11.0	11.8
87.5°	5.1	5.1	5.9	6.8	7.6
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)