

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: P544996

Luminaire Tested: **FMR-12-1-LD4-2HI-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: P544996
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-40-UNV-81-94-EDD
Description: 1X1 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

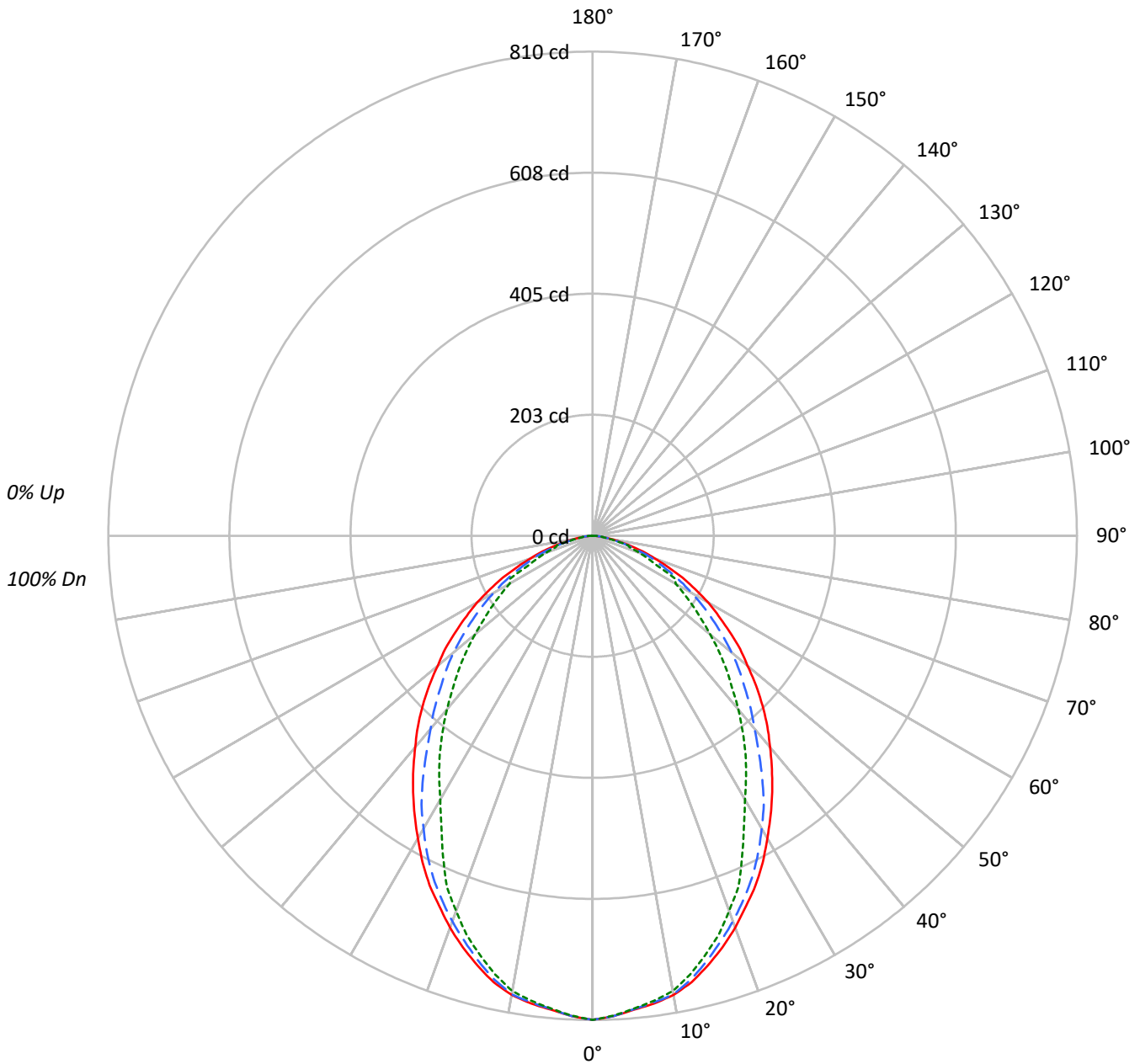
Lumens per Lamp: N/A
Luminaire Lumens: 1590.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (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				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			100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8718	8718	8718
5°	8600	8589	8579
10°	8525	8514	8453
15°	8295	8212	8097
20°	7991	7861	7647
25°	7662	7495	7029
30°	7262	7029	6331
35°	6878	6497	5857
40°	6486	5920	5328
45°	6115	5474	4818
50°	5660	5081	4297
55°	5236	4603	3849
60°	4796	4112	3447
65°	4220	3601	3054
70°	3478	3153	2593
75°	2766	2416	2533
80°	1860	1742	1624
85°	1161	1383	1618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.4	4.7
10°-20°	206.9	13.0
20°-30°	286.5	18.0
30°-40°	305.4	19.2
40°-50°	278.7	17.5
50°-60°	218.3	13.7
60°-70°	142.3	8.9
70°-80°	63.0	4.0
80°-90°	13.5	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°	568.8	35.8
0°-40°	874.2	55.0
0°-60°	1371.2	86.2
0°-90°	1590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1590.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	796	795	795	794	794	76
15°	744	744	737	729	727	209
25°	645	641	631	609	592	296
35°	523	520	494	457	446	327
45°	402	393	360	330	316	309
55°	279	271	245	216	205	250
65°	166	156	141	144	120	163
75°	66	62	58	55	61	71
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	809.9	809.9	809.9	809.9	809.9
2.5°	804.3	804.3	804.3	803.4	803.4
5°	795.9	794.9	794.9	794.0	794.0
7.5°	789.3	788.4	787.5	786.5	784.6
10°	780.0	780.0	779.0	774.3	773.4
12.5°	765.0	764.0	760.3	753.7	751.9
15°	744.4	744.4	736.9	729.4	726.6
17.5°	721.9	721.0	711.6	704.1	700.4
20°	697.6	695.7	686.3	674.2	667.6
22.5°	670.4	670.4	659.2	643.3	636.7
25°	645.1	641.4	631.1	608.6	591.8
27.5°	616.1	610.5	599.3	567.4	547.8
30°	584.3	581.5	565.5	524.3	509.4
32.5°	554.3	549.6	532.8	489.7	477.5
35°	523.4	519.7	494.4	456.9	445.7
37.5°	492.5	487.8	456.0	426.0	412.0
40°	461.6	456.0	421.3	394.2	379.2
42.5°	432.6	425.1	391.4	362.4	345.5
45°	401.7	393.3	359.6	329.6	316.5
47.5°	370.8	363.3	332.4	301.5	286.5
50°	338.0	331.5	303.4	272.5	256.6
52.5°	310.9	300.6	273.4	242.5	229.4
55°	279.0	270.6	245.3	216.3	205.1
57.5°	250.0	241.6	218.2	191.0	181.6
60°	222.8	210.7	191.0	167.6	160.1
62.5°	192.9	183.5	166.7	147.0	156.4
65°	165.7	156.4	141.4	144.2	119.9
67.5°	135.8	131.1	118.0	104.9	101.1
70°	110.5	104.9	100.2	86.1	82.4
72.5°	88.0	82.4	75.8	68.4	65.5
75°	66.5	61.8	58.1	55.2	60.9
77.5°	45.9	44.0	41.2	38.4	37.5
80°	30.0	29.0	28.1	27.2	26.2
82.5°	17.8	17.8	17.8	17.8	17.8
85°	9.4	10.3	11.2	12.2	13.1
87.5°	5.6	5.6	6.6	7.5	8.4
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)