

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: P544998

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-81-97-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: P544998
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-81-97-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

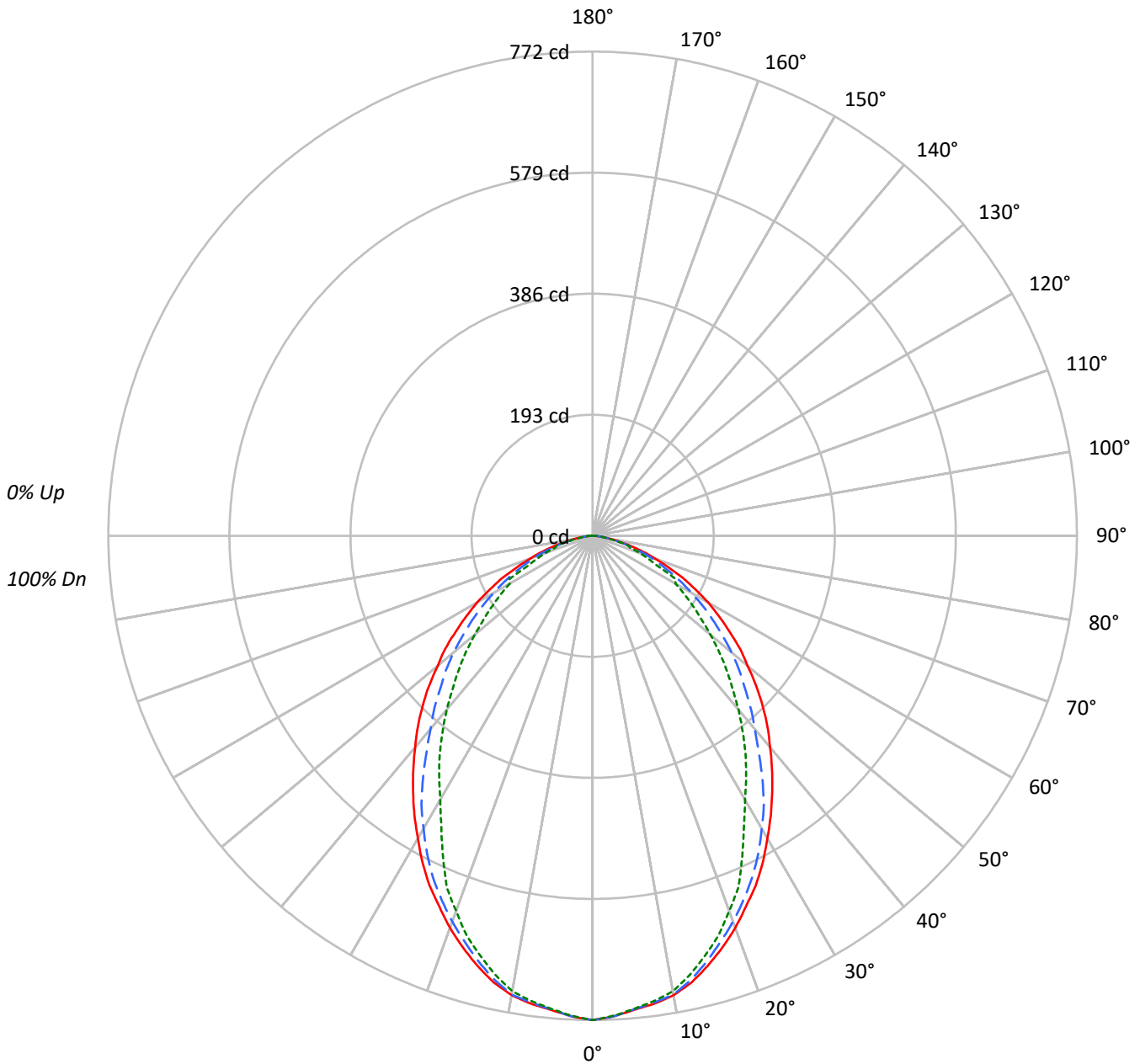
Lumens per Lamp: N/A
Luminaire Lumens: 1516.0 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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									
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°	8312	8312	8312
5°	8199	8189	8180
10°	8129	8119	8060
15°	7909	7830	7720
20°	7619	7496	7291
25°	7305	7146	6701
30°	6924	6702	6037
35°	6557	6194	5583
40°	6184	5644	5081
45°	5830	5218	4594
50°	5397	4845	4096
55°	4992	4389	3669
60°	4575	3920	3287
65°	4024	3433	2911
70°	3314	3006	2474
75°	2637	2304	2412
80°	1773	1661	1550
85°	1099	1321	1544



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.9	4.7
10°-20°	197.3	13.0
20°-30°	273.1	18.0
30°-40°	291.2	19.2
40°-50°	265.7	17.5
50°-60°	208.1	13.7
60°-70°	135.7	8.9
70°-80°	60.1	4.0
80°-90°	12.9	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°	542.3	35.8
0°-40°	833.5	55.0
0°-60°	1307.3	86.2
0°-90°	1516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	759	758	758	757	757	72
15°	710	710	703	696	693	200
25°	615	612	602	580	564	282
35°	499	496	471	436	425	312
45°	383	375	343	314	302	295
55°	266	258	234	206	196	239
65°	158	149	135	138	114	156
75°	63	59	55	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	772.2	772.2	772.2	772.2	772.2
2.5°	766.9	766.9	766.9	766.0	766.0
5°	758.8	757.9	757.9	757.1	757.1
7.5°	752.6	751.7	750.8	749.9	748.1
10°	743.7	743.7	742.8	738.3	737.4
12.5°	729.4	728.5	724.9	718.7	716.9
15°	709.7	709.7	702.6	695.5	692.8
17.5°	688.3	687.4	678.5	671.3	667.8
20°	665.1	663.3	654.4	642.8	636.5
22.5°	639.2	639.2	628.5	613.3	607.1
25°	615.1	611.5	601.7	580.3	564.2
27.5°	587.4	582.1	571.4	541.0	522.3
30°	557.1	554.4	539.2	499.9	485.7
32.5°	528.5	524.0	508.0	466.9	455.3
35°	499.0	495.5	471.4	435.7	424.9
37.5°	469.6	465.1	434.8	406.2	392.8
40°	440.1	434.8	401.7	375.8	361.6
42.5°	412.5	405.3	373.2	345.5	329.4
45°	383.0	375.0	342.8	314.2	301.8
47.5°	353.5	346.4	316.9	287.5	273.2
50°	322.3	316.0	289.3	259.8	244.6
52.5°	296.4	286.6	260.7	231.2	218.7
55°	266.0	258.0	233.9	206.2	195.5
57.5°	238.4	230.3	208.0	182.1	173.2
60°	212.5	200.9	182.1	159.8	152.7
62.5°	183.9	175.0	158.9	140.2	149.1
65°	158.0	149.1	134.8	137.5	114.3
67.5°	129.4	125.0	112.5	100.0	96.4
70°	105.3	100.0	95.5	82.1	78.6
72.5°	83.9	78.6	72.3	65.2	62.5
75°	63.4	58.9	55.4	52.7	58.0
77.5°	43.7	42.0	39.3	36.6	35.7
80°	28.6	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.2	7.1	8.0
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)