

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: P545314

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-81-87-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: P545314
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-12-2-LD4-1HI-50-UNV-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

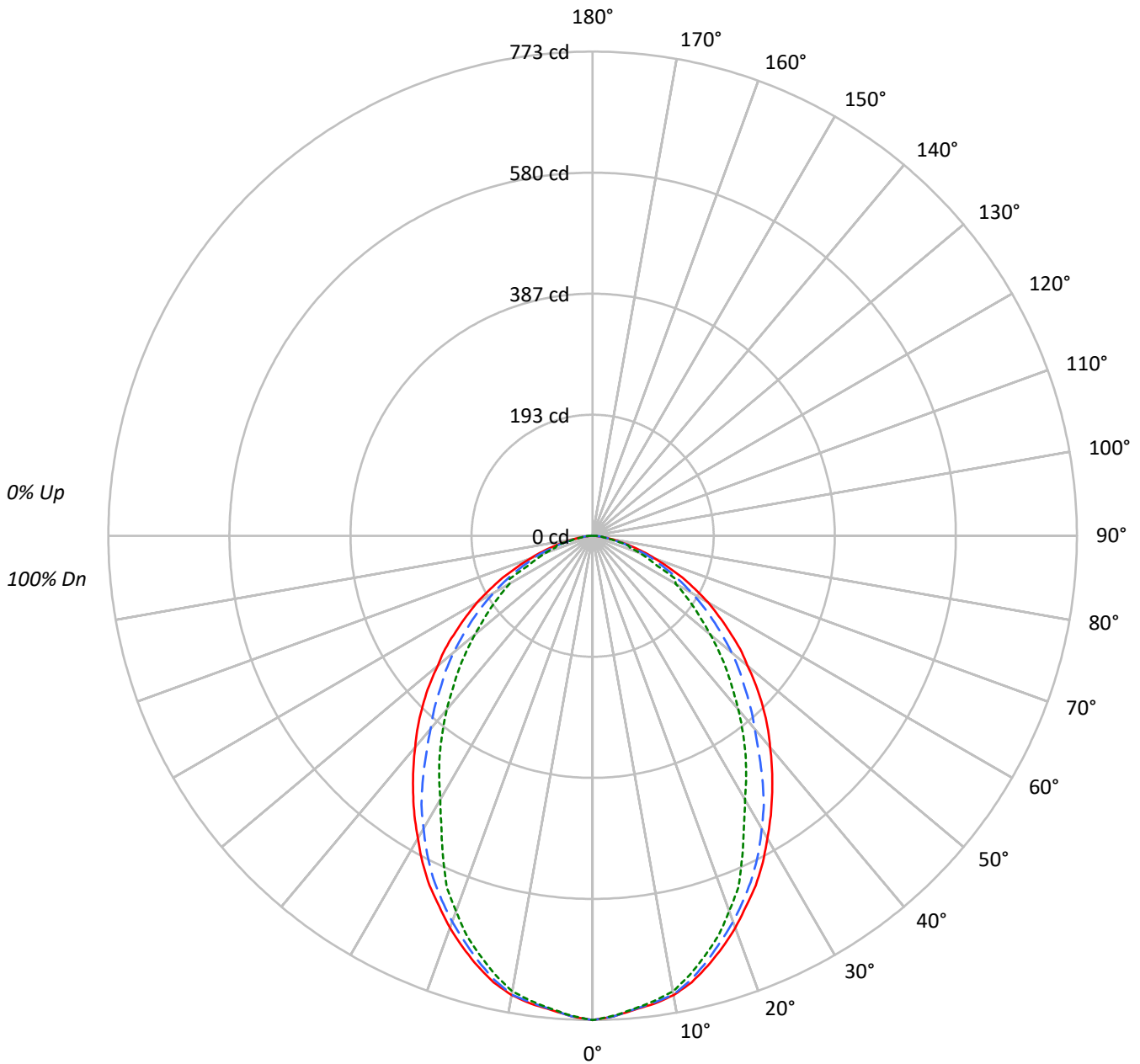
Lumens per Lamp: N/A
Luminaire Lumens: 1518.0 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4161	4161	4161
5°	4105	4100	4096
10°	4069	4064	4035
15°	3960	3920	3865
20°	3814	3753	3651
25°	3657	3578	3355
30°	3466	3355	3022
35°	3283	3101	2796
40°	3096	2826	2543
45°	2919	2613	2299
50°	2702	2425	2051
55°	2500	2198	1837
60°	2291	1963	1646
65°	2015	1719	1457
70°	1660	1506	1238
75°	1320	1152	1208
80°	886	831	775
85°	550	661	772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	4.7
10°-20°	197.5	13.0
20°-30°	273.5	18.0
30°-40°	291.6	19.2
40°-50°	266.0	17.5
50°-60°	208.4	13.7
60°-70°	135.8	8.9
70°-80°	60.2	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°	543.0	35.8
0°-40°	834.6	55.0
0°-60°	1309.0	86.2
0°-90°	1518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	760	759	759	758	758	72
15°	711	711	704	696	694	200
25°	616	612	602	581	565	283
35°	500	496	472	436	426	312
45°	384	376	343	315	302	295
55°	266	258	234	206	196	239
65°	158	149	135	138	114	156
75°	64	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°	773.2	773.2	773.2	773.2	773.2
2.5°	767.9	767.9	767.9	767.0	767.0
5°	759.8	758.9	758.9	758.1	758.1
7.5°	753.6	752.7	751.8	750.9	749.1
10°	744.6	744.6	743.7	739.3	738.4
12.5°	730.3	729.4	725.9	719.6	717.8
15°	710.7	710.7	703.5	696.4	693.7
17.5°	689.2	688.3	679.4	672.2	668.7
20°	666.0	664.2	655.3	643.6	637.4
22.5°	640.1	640.1	629.3	614.1	607.9
25°	615.9	612.3	602.5	581.1	565.0
27.5°	588.2	582.8	572.1	541.7	522.9
30°	557.8	555.1	539.9	500.6	486.3
32.5°	529.2	524.7	508.6	467.5	455.9
35°	499.7	496.1	472.0	436.2	425.5
37.5°	470.2	465.7	435.3	406.7	393.3
40°	440.7	435.3	402.3	376.3	362.0
42.5°	413.0	405.8	373.7	346.0	329.9
45°	383.5	375.5	343.3	314.7	302.1
47.5°	354.0	346.8	317.3	287.8	273.5
50°	322.7	316.5	289.6	260.1	244.9
52.5°	296.8	287.0	261.0	231.5	219.0
55°	266.4	258.3	234.2	206.5	195.8
57.5°	238.7	230.6	208.3	182.4	173.4
60°	212.8	201.1	182.4	160.0	152.9
62.5°	184.1	175.2	159.1	140.3	149.3
65°	158.2	149.3	135.0	137.7	114.4
67.5°	129.6	125.2	112.6	100.1	96.5
70°	105.5	100.1	95.7	82.2	78.7
72.5°	84.0	78.7	72.4	65.3	62.6
75°	63.5	59.0	55.4	52.7	58.1
77.5°	43.8	42.0	39.3	36.7	35.8
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	6.3	7.2	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)