

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: P545043

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-93-88-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: P545043
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-50-UNV-93-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

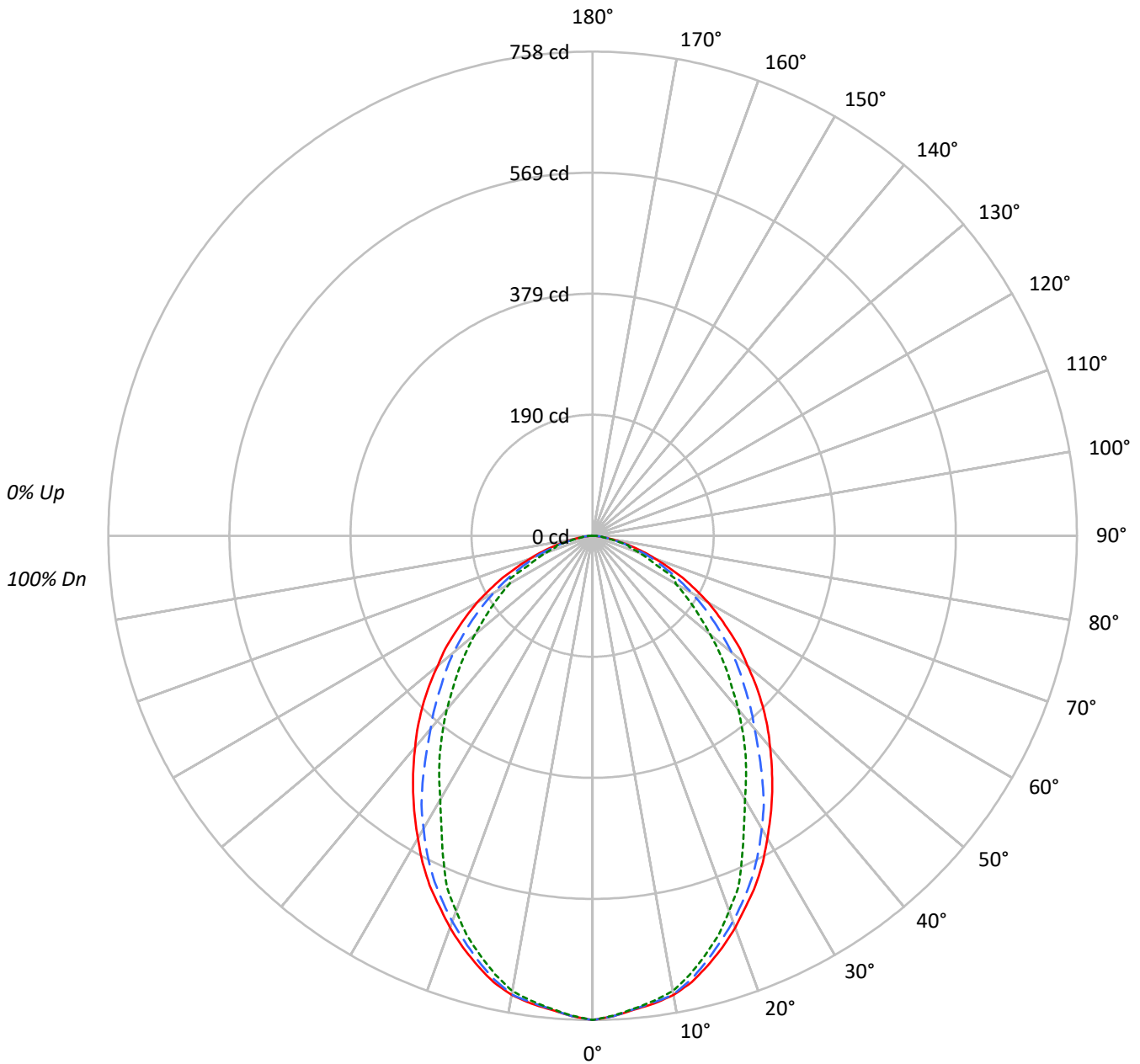
Lumens per Lamp: N/A
Luminaire Lumens: 1488.0 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	8159	8159	8159
5°	8048	8038	8029
10°	7978	7969	7911
15°	7763	7685	7578
20°	7478	7357	7157
25°	7170	7014	6577
30°	6796	6579	5925
35°	6436	6080	5481
40°	6070	5540	4987
45°	5722	5122	4509
50°	5297	4754	4021
55°	4900	4309	3601
60°	4491	3849	3225
65°	3950	3370	2858
70°	3254	2952	2426
75°	2587	2258	2371
80°	1736	1630	1519
85°	1087	1297	1519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	4.7
10°-20°	193.6	13.0
20°-30°	268.1	18.0
30°-40°	285.8	19.2
40°-50°	260.8	17.5
50°-60°	204.3	13.7
60°-70°	133.1	8.9
70°-80°	59.0	4.0
80°-90°	12.7	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°	532.3	35.8
0°-40°	818.1	55.0
0°-60°	1283.2	86.2
0°-90°	1488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	745	744	744	743	743	71
15°	697	697	690	683	680	196
25°	604	600	591	570	554	277
35°	490	486	463	428	417	306
45°	376	368	336	308	296	290
55°	261	253	230	202	192	234
65°	155	146	132	135	112	153
75°	62	58	54	52	57	67
85°	9	10	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°	758.0	758.0	758.0	758.0	758.0
2.5°	752.7	752.7	752.7	751.8	751.8
5°	744.8	743.9	743.9	743.1	743.1
7.5°	738.7	737.8	736.9	736.1	734.3
10°	729.9	729.9	729.1	724.7	723.8
12.5°	715.9	715.0	711.5	705.4	703.6
15°	696.6	696.6	689.6	682.6	680.0
17.5°	675.6	674.7	666.0	658.9	655.4
20°	652.8	651.1	642.3	630.9	624.8
22.5°	627.4	627.4	616.9	602.0	595.9
25°	603.7	600.2	590.6	569.6	553.8
27.5°	576.6	571.3	560.8	531.0	512.6
30°	546.8	544.2	529.3	490.7	476.7
32.5°	518.7	514.4	498.6	458.3	446.9
35°	489.8	486.3	462.7	427.6	417.1
37.5°	460.9	456.5	426.7	398.7	385.6
40°	432.0	426.7	394.3	368.9	354.9
42.5°	404.8	397.8	366.3	339.1	323.3
45°	375.9	368.0	336.5	308.4	296.2
47.5°	347.0	340.0	311.1	282.2	268.1
50°	316.3	310.2	283.9	255.0	240.1
52.5°	290.9	281.3	255.9	227.0	214.7
55°	261.1	253.2	229.6	202.4	191.9
57.5°	234.0	226.1	204.2	178.8	170.0
60°	208.6	197.2	178.8	156.9	149.8
62.5°	180.5	171.7	156.0	137.6	146.3
65°	155.1	146.3	132.3	134.9	112.2
67.5°	127.1	122.7	110.4	98.1	94.6
70°	103.4	98.1	93.8	80.6	77.1
72.5°	82.4	77.1	71.0	64.0	61.3
75°	62.2	57.8	54.3	51.7	57.0
77.5°	42.9	41.2	38.6	35.9	35.1
80°	28.0	27.2	26.3	25.4	24.5
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.8	9.6	10.5	11.4	12.3
87.5°	5.3	5.3	6.1	7.0	7.9
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)