

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: P545294

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-82-97-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: P545294
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-40-UNV-82-97-EDD
Description: 1X2 FMR TROFFER WITH .187 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

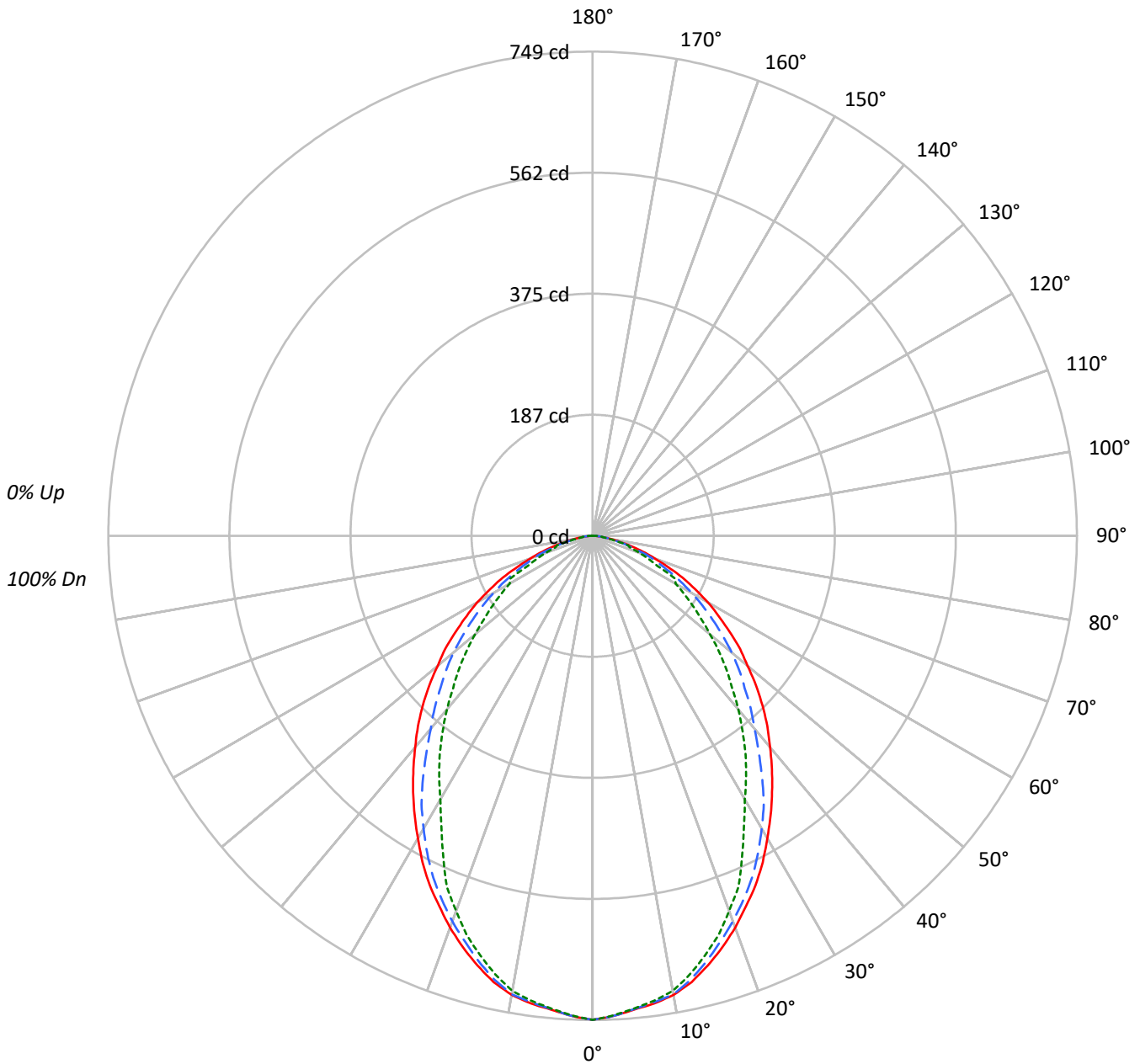
Lumens per Lamp: N/A
Luminaire Lumens: 1470.0 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				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°	4030	4030	4030
5°	3975	3970	3966
10°	3941	3936	3907
15°	3835	3796	3743
20°	3694	3634	3535
25°	3542	3465	3249
30°	3357	3250	2926
35°	3179	3003	2708
40°	2999	2736	2463
45°	2827	2530	2227
50°	2617	2349	1986
55°	2421	2128	1779
60°	2217	1901	1593
65°	1951	1664	1411
70°	1607	1457	1199
75°	1279	1117	1171
80°	859	806	750
85°	537	642	747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.7	4.7
10°-20°	191.3	13.0
20°-30°	264.8	18.0
30°-40°	282.4	19.2
40°-50°	257.6	17.5
50°-60°	201.8	13.7
60°-70°	131.5	8.9
70°-80°	58.3	4.0
80°-90°	12.5	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°	525.8	35.8
0°-40°	808.2	55.0
0°-60°	1267.7	86.2
0°-90°	1470.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1470.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	749	749	749	749	749	
5°	736	735	735	734	734	70
15°	688	688	681	674	672	193
25°	596	593	584	563	547	274
35°	484	480	457	422	412	303
45°	371	364	332	305	293	286
55°	258	250	227	200	190	231
65°	153	145	131	133	111	151
75°	62	57	54	51	56	66
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°	748.8	748.8	748.8	748.8	748.8
2.5°	743.6	743.6	743.6	742.7	742.7
5°	735.8	734.9	734.9	734.1	734.1
7.5°	729.8	728.9	728.0	727.2	725.4
10°	721.1	721.1	720.2	715.9	715.0
12.5°	707.2	706.4	702.9	696.9	695.1
15°	688.2	688.2	681.3	674.4	671.8
17.5°	667.4	666.6	657.9	651.0	647.5
20°	644.9	643.2	634.5	623.3	617.2
22.5°	619.8	619.8	609.4	594.7	588.7
25°	596.4	593.0	583.5	562.7	547.1
27.5°	569.6	564.4	554.0	524.6	506.4
30°	540.2	537.6	522.9	484.8	470.9
32.5°	512.5	508.1	492.6	452.7	441.5
35°	483.9	480.4	457.1	422.4	412.1
37.5°	455.3	451.0	421.6	393.9	380.9
40°	426.8	421.6	389.5	364.4	350.6
42.5°	399.9	393.0	361.8	335.0	319.4
45°	371.4	363.6	332.4	304.7	292.6
47.5°	342.8	335.9	307.3	278.7	264.9
50°	312.5	306.4	280.5	251.9	237.2
52.5°	287.4	277.9	252.8	224.2	212.1
55°	258.0	250.2	226.8	200.0	189.6
57.5°	231.1	223.3	201.7	176.6	167.9
60°	206.0	194.8	176.6	155.0	148.0
62.5°	178.3	169.7	154.1	135.9	144.6
65°	153.2	144.6	130.7	133.3	110.8
67.5°	125.5	121.2	109.1	97.0	93.5
70°	102.1	97.0	92.6	79.6	76.2
72.5°	81.4	76.2	70.1	63.2	60.6
75°	61.5	57.1	53.7	51.1	56.3
77.5°	42.4	40.7	38.1	35.5	34.6
80°	27.7	26.8	26.0	25.1	24.2
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.7	9.5	10.4	11.3	12.1
87.5°	5.2	5.2	6.1	6.9	7.8
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)