

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: P545328

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-93-85-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: P545328
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-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

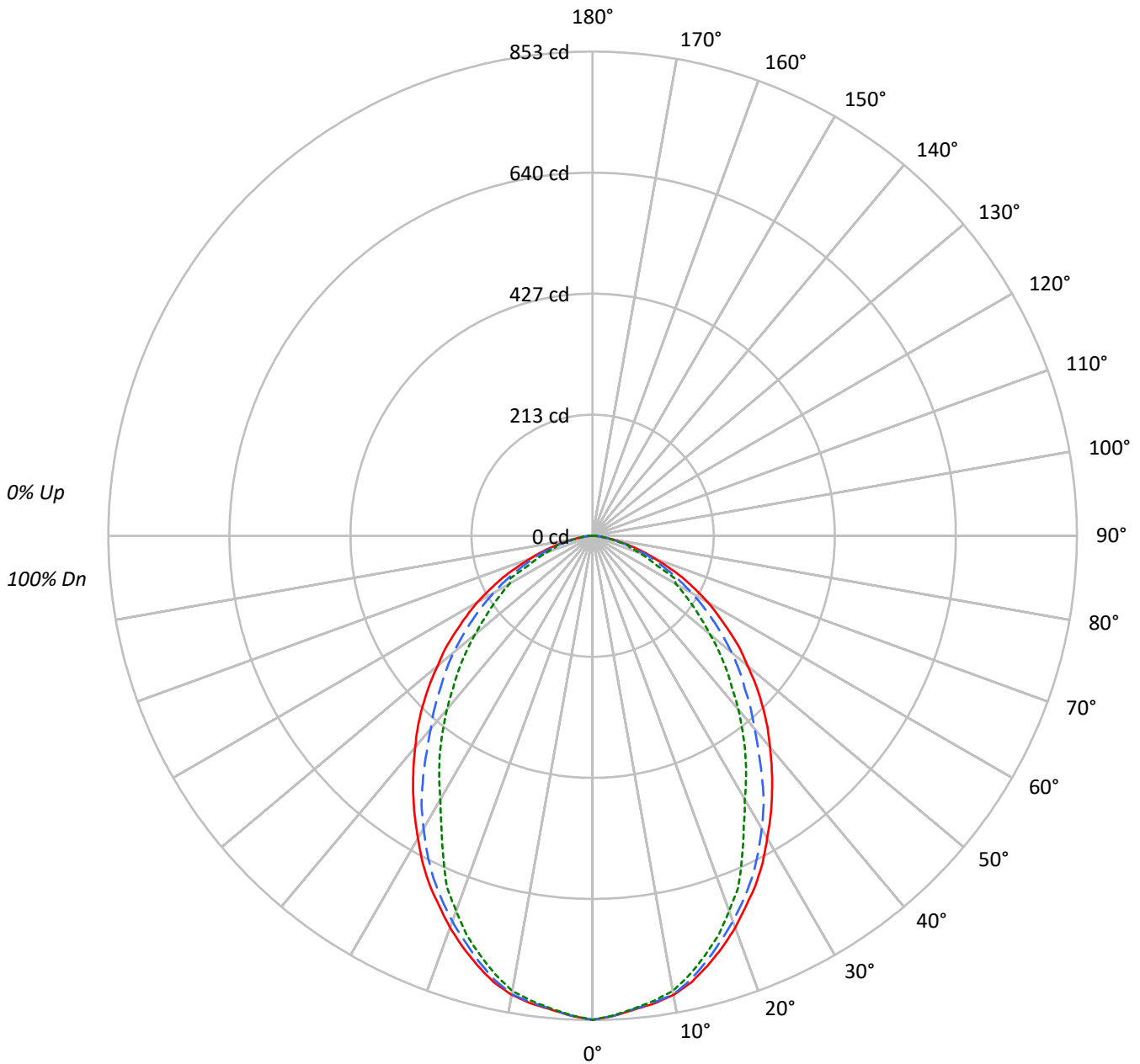
Lumens per Lamp: N/A
Luminaire Lumens: 1674.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4589	4589	4589
5°	4527	4521	4517
10°	4488	4482	4450
15°	4367	4323	4262
20°	4206	4139	4026
25°	4033	3945	3700
30°	3823	3700	3333
35°	3621	3420	3083
40°	3414	3117	2805
45°	3219	2881	2536
50°	2980	2674	2262
55°	2757	2424	2026
60°	2525	2165	1815
65°	2222	1896	1607
70°	1830	1660	1366
75°	1456	1271	1333
80°	976	917	855
85°	611	729	852



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	4.7
10°-20°	217.8	13.0
20°-30°	301.6	18.0
30°-40°	321.6	19.2
40°-50°	293.4	17.5
50°-60°	229.8	13.7
60°-70°	149.8	8.9
70°-80°	66.4	4.0
80°-90°	14.2	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°	598.8	35.8
0°-40°	920.4	55.0
0°-60°	1443.6	86.2
0°-90°	1674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1674.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	838	837	837	836	836	80
15°	784	784	776	768	765	220
25°	679	675	664	641	623	312
35°	551	547	520	481	469	345
45°	423	414	378	347	333	326
55°	294	285	258	228	216	263
65°	174	165	149	152	126	172
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	852.7	852.7	852.7	852.7	852.7
2.5°	846.8	846.8	846.8	845.8	845.8
5°	837.9	836.9	836.9	836.0	836.0
7.5°	831.0	830.0	829.1	828.1	826.1
10°	821.2	821.2	820.2	815.3	814.3
12.5°	805.4	804.4	800.5	793.6	791.6
15°	783.7	783.7	775.8	767.9	765.0
17.5°	760.0	759.1	749.2	741.3	737.4
20°	734.4	732.4	722.6	709.8	702.9
22.5°	705.8	705.8	694.0	677.2	670.3
25°	679.2	675.3	664.4	640.8	623.0
27.5°	648.7	642.7	630.9	597.4	576.7
30°	615.1	612.2	595.4	552.0	536.3
32.5°	583.6	578.7	560.9	515.6	502.8
35°	551.1	547.1	520.5	481.1	469.2
37.5°	518.5	513.6	480.1	448.5	433.8
40°	486.0	480.1	443.6	415.0	399.2
42.5°	455.4	447.6	412.1	381.5	363.8
45°	422.9	414.0	378.5	347.0	333.2
47.5°	390.4	382.5	350.0	317.4	301.7
50°	355.9	349.0	319.4	286.9	270.1
52.5°	327.3	316.4	287.9	255.3	241.5
55°	293.8	284.9	258.3	227.7	215.9
57.5°	263.2	254.3	229.7	201.1	191.2
60°	234.6	221.8	201.1	176.5	168.6
62.5°	203.1	193.2	175.5	154.8	164.6
65°	174.5	164.6	148.9	151.8	126.2
67.5°	142.9	138.0	124.2	110.4	106.5
70°	116.3	110.4	105.5	90.7	86.8
72.5°	92.7	86.8	79.8	72.0	69.0
75°	70.0	65.1	61.1	58.2	64.1
77.5°	48.3	46.3	43.4	40.4	39.4
80°	31.5	30.6	29.6	28.6	27.6
82.5°	18.7	18.7	18.7	18.7	18.7
85°	9.9	10.8	11.8	12.8	13.8
87.5°	5.9	5.9	6.9	7.9	8.9
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)