

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: P545360

Luminaire Tested: **FMR-12-2-LD4-1LO-35-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: P545360
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-LD4-1LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

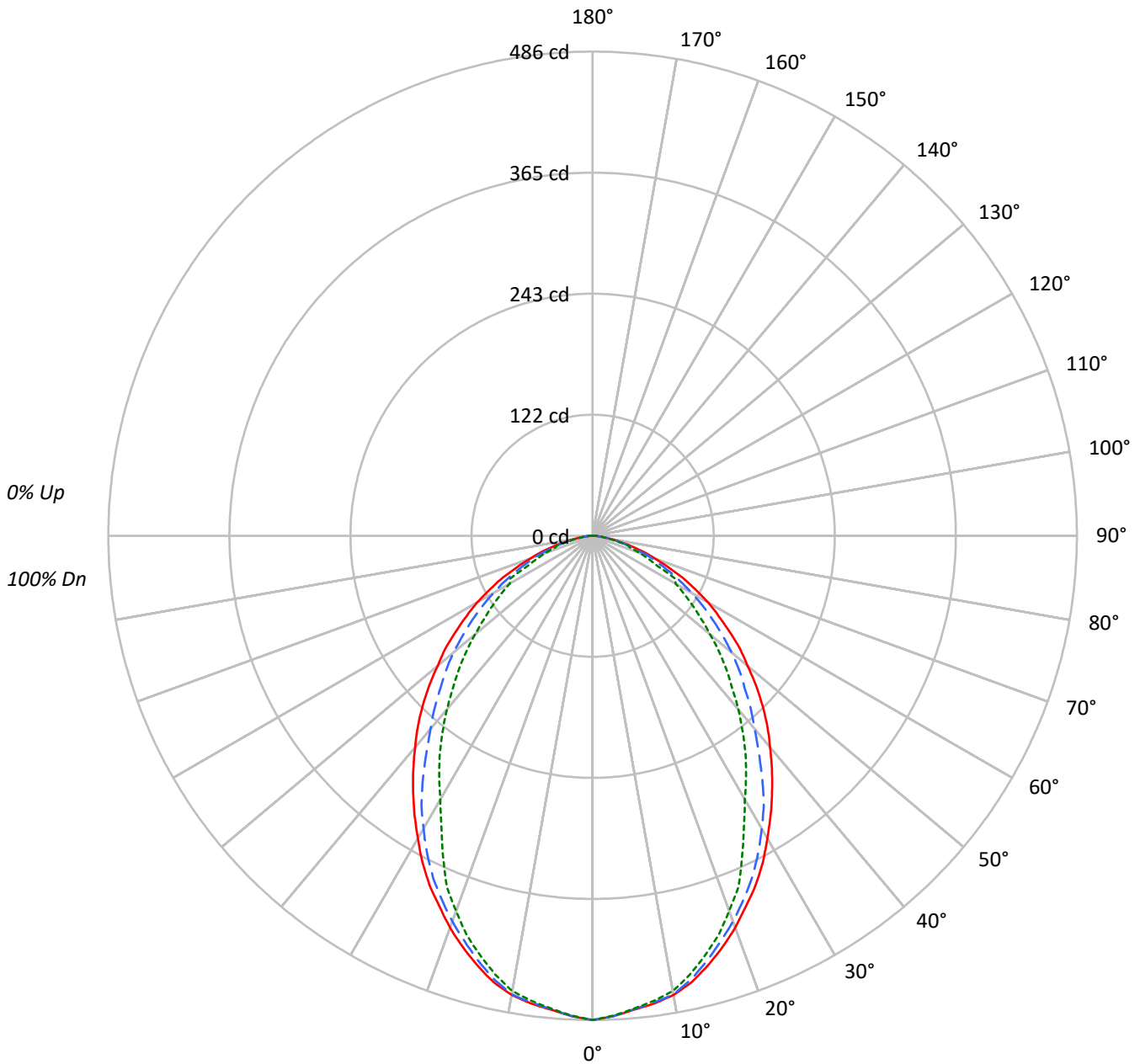
Lumens per Lamp: N/A
Luminaire Lumens: 954.0 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	2616	2616	2616
5°	2580	2577	2574
10°	2558	2554	2536
15°	2488	2463	2429
20°	2397	2359	2294
25°	2299	2249	2109
30°	2179	2109	1899
35°	2063	1949	1757
40°	1946	1776	1598
45°	1834	1642	1445
50°	1698	1524	1289
55°	1571	1381	1154
60°	1439	1234	1034
65°	1266	1080	916
70°	1043	946	777
75°	830	724	759
80°	558	524	487
85°	346	414	488



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	4.7
10°-20°	124.1	13.0
20°-30°	171.9	18.0
30°-40°	183.3	19.2
40°-50°	167.2	17.5
50°-60°	131.0	13.7
60°-70°	85.4	8.9
70°-80°	37.8	4.0
80°-90°	8.1	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°	341.3	35.8
0°-40°	524.5	55.0
0°-60°	822.7	86.2
0°-90°	954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	478	477	477	476	476	45
15°	447	447	442	438	436	126
25°	387	385	379	365	355	178
35°	314	312	297	274	267	196
45°	241	236	216	198	190	186
55°	167	162	147	130	123	150
65°	99	94	85	86	72	98
75°	40	37	35	33	36	43
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	486.0	486.0	486.0	486.0	486.0
2.5°	482.6	482.6	482.6	482.0	482.0
5°	477.5	477.0	477.0	476.4	476.4
7.5°	473.6	473.0	472.5	471.9	470.8
10°	468.0	468.0	467.4	464.6	464.0
12.5°	459.0	458.4	456.2	452.2	451.1
15°	446.6	446.6	442.1	437.6	436.0
17.5°	433.1	432.6	427.0	422.5	420.2
20°	418.5	417.4	411.8	404.5	400.6
22.5°	402.2	402.2	395.5	386.0	382.0
25°	387.1	384.8	378.7	365.2	355.1
27.5°	369.7	366.3	359.6	340.4	328.7
30°	350.6	348.9	339.3	314.6	305.6
32.5°	332.6	329.8	319.7	293.8	286.5
35°	314.0	311.8	296.6	274.2	267.4
37.5°	295.5	292.7	273.6	255.6	247.2
40°	277.0	273.6	252.8	236.5	227.5
42.5°	259.6	255.1	234.8	217.4	207.3
45°	241.0	236.0	215.7	197.8	189.9
47.5°	222.5	218.0	199.4	180.9	171.9
50°	202.8	198.9	182.0	163.5	153.9
52.5°	186.5	180.3	164.0	145.5	137.6
55°	167.4	162.4	147.2	129.8	123.0
57.5°	150.0	144.9	130.9	114.6	109.0
60°	133.7	126.4	114.6	100.6	96.1
62.5°	115.7	110.1	100.0	88.2	93.8
65°	99.4	93.8	84.8	86.5	71.9
67.5°	81.5	78.7	70.8	62.9	60.7
70°	66.3	62.9	60.1	51.7	49.4
72.5°	52.8	49.4	45.5	41.0	39.3
75°	39.9	37.1	34.8	33.1	36.5
77.5°	27.5	26.4	24.7	23.0	22.5
80°	18.0	17.4	16.9	16.3	15.7
82.5°	10.7	10.7	10.7	10.7	10.7
85°	5.6	6.2	6.7	7.3	7.9
87.5°	3.4	3.4	3.9	4.5	5.1
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)