

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: P545346

Luminaire Tested: **FMR-12-2-LD4-1LO-35-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: P545346
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-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

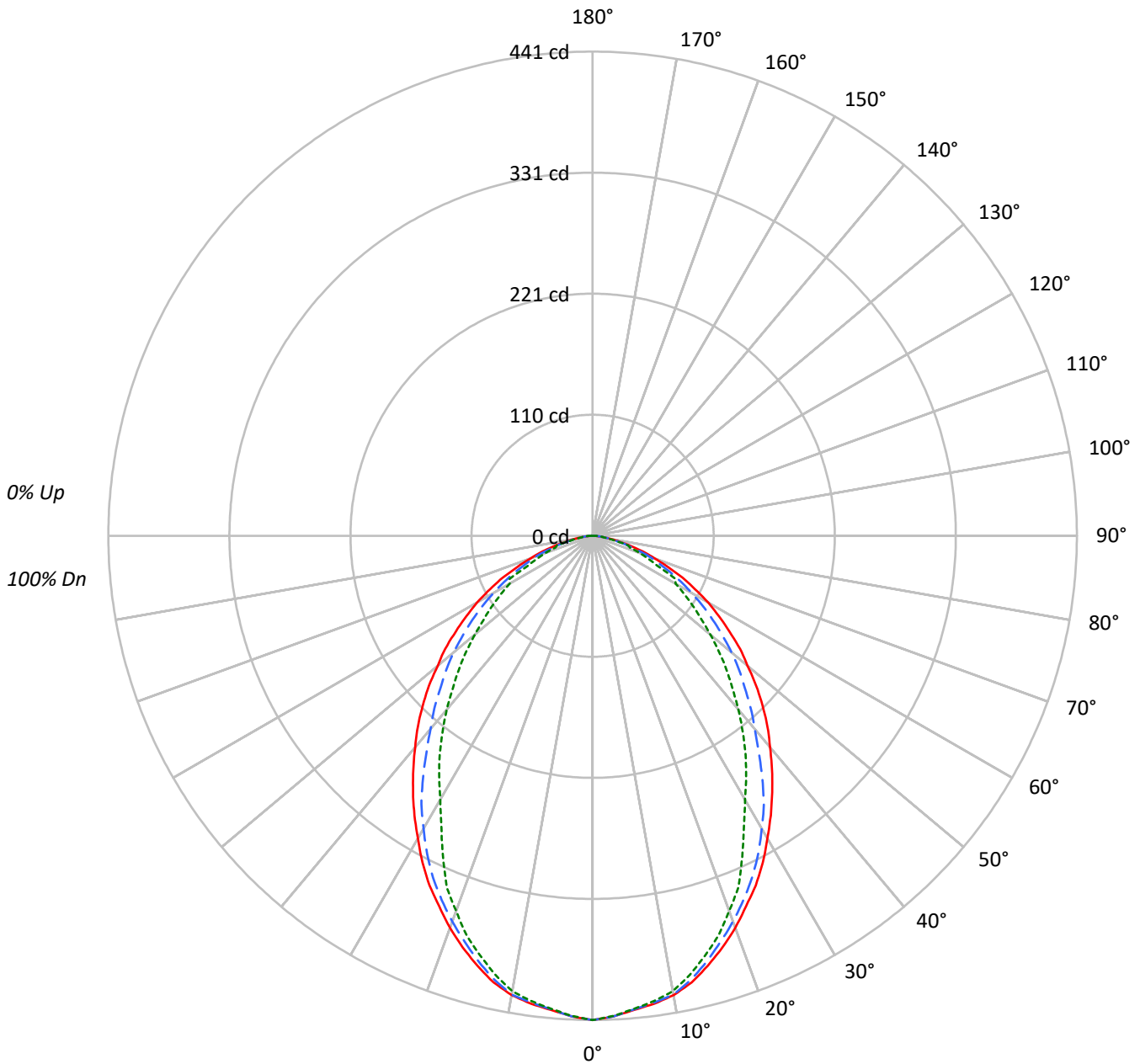
Lumens per Lamp: N/A
Luminaire Lumens: 866.0 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	2374	2374	2374
5°	2342	2339	2337
10°	2322	2319	2302
15°	2259	2237	2205
20°	2176	2141	2082
25°	2087	2041	1914
30°	1977	1914	1724
35°	1873	1769	1595
40°	1766	1612	1451
45°	1665	1490	1312
50°	1541	1383	1170
55°	1426	1254	1048
60°	1307	1119	939
65°	1150	981	832
70°	947	859	707
75°	753	657	688
80°	505	474	443
85°	315	377	438



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.1	4.7
10°-20°	112.7	13.0
20°-30°	156.0	18.0
30°-40°	166.4	19.2
40°-50°	151.8	17.5
50°-60°	118.9	13.7
60°-70°	77.5	8.9
70°-80°	34.3	4.0
80°-90°	7.4	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°	309.8	35.8
0°-40°	476.1	55.0
0°-60°	746.8	86.2
0°-90°	866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	866.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	441	441	441	441	441	
5°	434	433	433	432	432	41
15°	405	405	401	397	396	114
25°	351	349	344	332	322	161
35°	285	283	269	249	243	178
45°	219	214	196	180	172	169
55°	152	147	134	118	112	136
65°	90	85	77	78	65	89
75°	36	34	32	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	441.1	441.1	441.1	441.1	441.1
2.5°	438.1	438.1	438.1	437.6	437.6
5°	433.5	433.0	433.0	432.5	432.5
7.5°	429.9	429.4	428.9	428.4	427.4
10°	424.8	424.8	424.3	421.7	421.2
12.5°	416.7	416.1	414.1	410.5	409.5
15°	405.4	405.4	401.4	397.3	395.7
17.5°	393.2	392.7	387.6	383.5	381.5
20°	379.9	378.9	373.8	367.2	363.6
22.5°	365.1	365.1	359.0	350.4	346.8
25°	351.4	349.3	343.7	331.5	322.3
27.5°	335.6	332.5	326.4	309.0	298.3
30°	318.2	316.7	308.0	285.6	277.4
32.5°	301.9	299.4	290.2	266.7	260.1
35°	285.1	283.0	269.3	248.9	242.7
37.5°	268.2	265.7	248.4	232.0	224.4
40°	251.4	248.4	229.5	214.7	206.5
42.5°	235.6	231.5	213.2	197.4	188.2
45°	218.8	214.2	195.8	179.5	172.4
47.5°	202.0	197.9	181.0	164.2	156.1
50°	184.1	180.5	165.2	148.4	139.7
52.5°	169.3	163.7	148.9	132.1	124.9
55°	152.0	147.4	133.6	117.8	111.7
57.5°	136.2	131.6	118.8	104.0	98.9
60°	121.4	114.7	104.0	91.3	87.2
62.5°	105.1	100.0	90.8	80.1	85.2
65°	90.3	85.2	77.0	78.5	65.3
67.5°	73.9	71.4	64.3	57.1	55.1
70°	60.2	57.1	54.6	46.9	44.9
72.5°	47.9	44.9	41.3	37.2	35.7
75°	36.2	33.7	31.6	30.1	33.1
77.5°	25.0	24.0	22.4	20.9	20.4
80°	16.3	15.8	15.3	14.8	14.3
82.5°	9.7	9.7	9.7	9.7	9.7
85°	5.1	5.6	6.1	6.6	7.1
87.5°	3.1	3.1	3.6	4.1	4.6
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)