

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: P545471

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-81-84-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: P545471
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-LD4-1STD-40-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

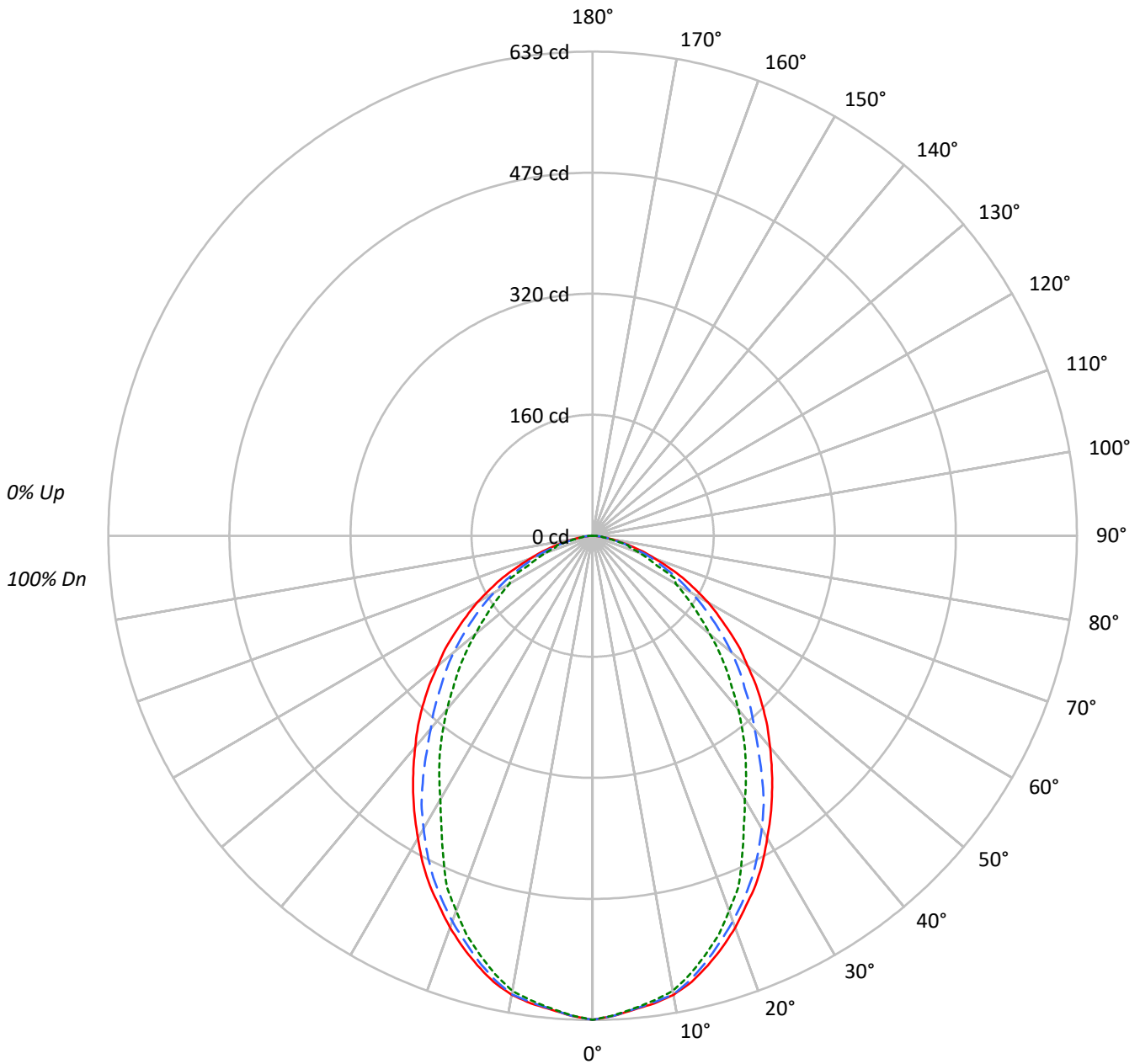
Lumens per Lamp: N/A
Luminaire Lumens: 1254.0 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	3438	3438	3438
5°	3391	3387	3383
10°	3362	3358	3334
15°	3271	3238	3193
20°	3151	3100	3015
25°	3021	2956	2771
30°	2864	2772	2496
35°	2712	2562	2309
40°	2558	2335	2101
45°	2411	2159	1900
50°	2232	2004	1694
55°	2065	1816	1517
60°	1892	1621	1359
65°	1664	1420	1203
70°	1371	1243	1023
75°	1090	952	998
80°	731	688	642
85°	457	550	636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	4.7
10°-20°	163.2	13.0
20°-30°	225.9	18.0
30°-40°	240.9	19.2
40°-50°	219.8	17.5
50°-60°	172.2	13.7
60°-70°	112.2	8.9
70°-80°	49.7	4.0
80°-90°	10.7	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°	448.6	35.8
0°-40°	689.5	55.0
0°-60°	1081.4	86.2
0°-90°	1254.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1254.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	628	627	627	626	626	60
15°	587	587	581	575	573	165
25°	509	506	498	480	467	234
35°	413	410	390	360	352	258
45°	317	310	284	260	250	244
55°	220	213	194	171	162	197
65°	131	123	112	114	94	129
75°	52	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	638.8	638.8	638.8	638.8	638.8
2.5°	634.3	634.3	634.3	633.6	633.6
5°	627.7	627.0	627.0	626.2	626.2
7.5°	622.5	621.8	621.0	620.3	618.8
10°	615.1	615.1	614.4	610.7	610.0
12.5°	603.3	602.6	599.6	594.5	593.0
15°	587.1	587.1	581.2	575.3	573.0
17.5°	569.4	568.6	561.2	555.3	552.4
20°	550.2	548.7	541.3	531.7	526.5
22.5°	528.7	528.7	519.9	507.3	502.2
25°	508.8	505.8	497.7	480.0	466.7
27.5°	485.9	481.5	472.6	447.5	432.0
30°	460.8	458.6	446.0	413.5	401.7
32.5°	437.2	433.5	420.2	386.2	376.6
35°	412.8	409.8	389.9	360.4	351.5
37.5°	388.4	384.7	359.6	336.0	324.9
40°	364.1	359.6	332.3	310.9	299.1
42.5°	341.2	335.3	308.7	285.8	272.5
45°	316.8	310.2	283.6	259.9	249.6
47.5°	292.4	286.5	262.2	237.8	226.0
50°	266.6	261.4	239.3	214.9	202.3
52.5°	245.2	237.0	215.6	191.3	180.9
55°	220.1	213.4	193.5	170.6	161.7
57.5°	197.2	190.5	172.1	150.6	143.3
60°	175.8	166.2	150.6	132.2	126.3
62.5°	152.1	144.7	131.4	115.9	123.3
65°	130.7	123.3	111.5	113.7	94.5
67.5°	107.1	103.4	93.0	82.7	79.8
70°	87.1	82.7	79.0	67.9	65.0
72.5°	69.4	65.0	59.8	53.9	51.7
75°	52.4	48.7	45.8	43.6	48.0
77.5°	36.2	34.7	32.5	30.3	29.5
80°	23.6	22.9	22.2	21.4	20.7
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.9	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	6.6
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)