

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: P547027

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-93-88-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: P547027
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-24-4-LD4-3HI-40-UNV-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

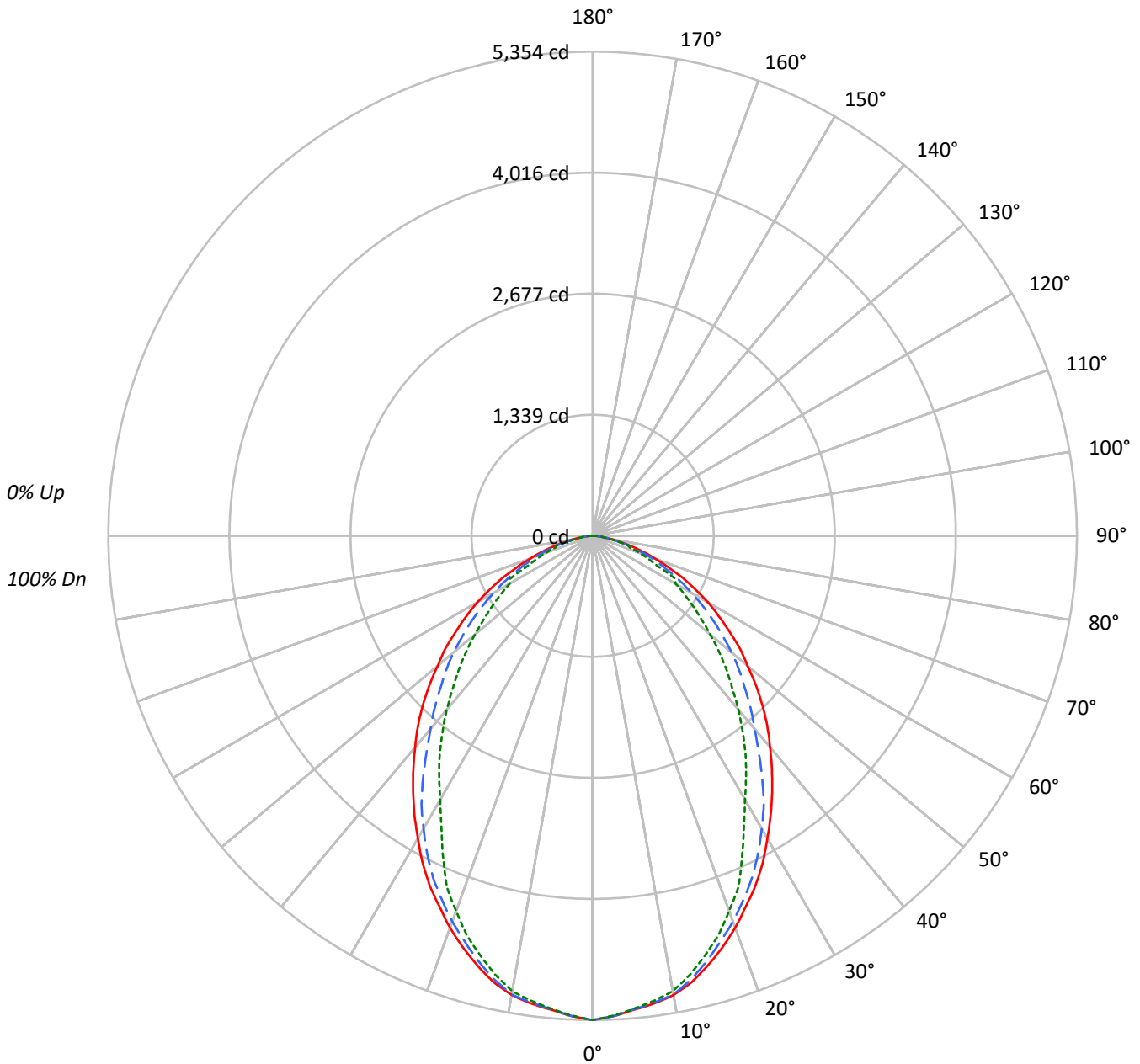
Lumens per Lamp: N/A
Luminaire Lumens: 10511.0 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	7204	7204	7204
5°	7106	7098	7089
10°	7044	7036	6985
15°	6855	6786	6691
20°	6603	6496	6319
25°	6331	6194	5808
30°	6001	5808	5231
35°	5683	5368	4839
40°	5360	4892	4403
45°	5053	4523	3981
50°	4677	4198	3550
55°	4327	3804	3180
60°	3964	3398	2848
65°	3488	2976	2522
70°	2873	2605	2143
75°	2285	1995	2091
80°	1535	1439	1343
85°	956	1147	1338



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	498.4	4.7
10°-20°	1367.8	13.0
20°-30°	1893.7	18.0
30°-40°	2019.2	19.2
40°-50°	1842.1	17.5
50°-60°	1443.1	13.7
60°-70°	940.6	8.9
70°-80°	416.7	4.0
80°-90°	89.5	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°	3759.9	35.8
0°-40°	5779.1	55.0
0°-60°	9064.3	86.2
0°-90°	10511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10511.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5354	5354	5354	5354	5354	
5°	5261	5255	5255	5249	5249	499
15°	4921	4921	4871	4822	4803	1383
25°	4265	4240	4172	4023	3912	1958
35°	3460	3435	3268	3021	2946	2163
45°	2655	2600	2377	2179	2092	2045
55°	1845	1789	1622	1430	1356	1654
65°	1096	1034	935	953	792	1080
75°	440	408	384	365	402	471
85°	62	68	74	80	87	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5354.2	5354.2	5354.2	5354.2	5354.2
2.5°	5317.0	5317.0	5317.0	5310.8	5310.8
5°	5261.3	5255.1	5255.1	5248.9	5248.9
7.5°	5218.0	5211.8	5205.6	5199.4	5187.0
10°	5156.1	5156.1	5149.9	5119.0	5112.8
12.5°	5057.1	5050.9	5026.1	4982.8	4970.4
15°	4920.9	4920.9	4871.4	4821.8	4803.3
17.5°	4772.3	4766.1	4704.2	4654.7	4630.0
20°	4611.4	4599.0	4537.1	4456.6	4413.3
22.5°	4431.9	4431.9	4357.6	4252.4	4209.1
25°	4264.8	4240.0	4171.9	4023.4	3911.9
27.5°	4072.9	4035.7	3961.5	3751.0	3621.0
30°	3862.4	3843.9	3738.6	3466.3	3367.2
32.5°	3664.4	3633.4	3522.0	3237.3	3156.8
35°	3460.1	3435.3	3268.2	3020.6	2946.3
37.5°	3255.8	3224.9	3014.4	2816.4	2723.5
40°	3051.6	3014.4	2785.4	2605.9	2506.9
42.5°	2859.7	2810.2	2587.3	2395.4	2284.0
45°	2655.4	2599.7	2376.9	2178.8	2092.1
47.5°	2451.2	2401.6	2197.4	1993.1	1894.1
50°	2234.5	2191.2	2005.5	1801.2	1696.0
52.5°	2055.0	1986.9	1807.4	1603.2	1516.5
55°	1844.6	1788.8	1621.7	1429.8	1355.6
57.5°	1652.7	1597.0	1442.2	1262.7	1200.8
60°	1473.2	1392.7	1262.7	1108.0	1058.5
62.5°	1275.1	1213.2	1101.8	971.8	1033.7
65°	1095.6	1033.7	934.7	953.2	792.3
67.5°	897.5	866.6	779.9	693.3	668.5
70°	730.4	693.3	662.3	569.5	544.7
72.5°	581.8	544.7	501.4	451.9	433.3
75°	439.5	408.5	383.8	365.2	402.3
77.5°	303.3	290.9	272.4	253.8	247.6
80°	198.1	191.9	185.7	179.5	173.3
82.5°	117.6	117.6	117.6	117.6	117.6
85°	61.9	68.1	74.3	80.5	86.7
87.5°	37.1	37.1	43.3	49.5	55.7
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)