

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: P547524

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-81-94-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: P547524
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-LD4-4STD-50-UNV-81-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

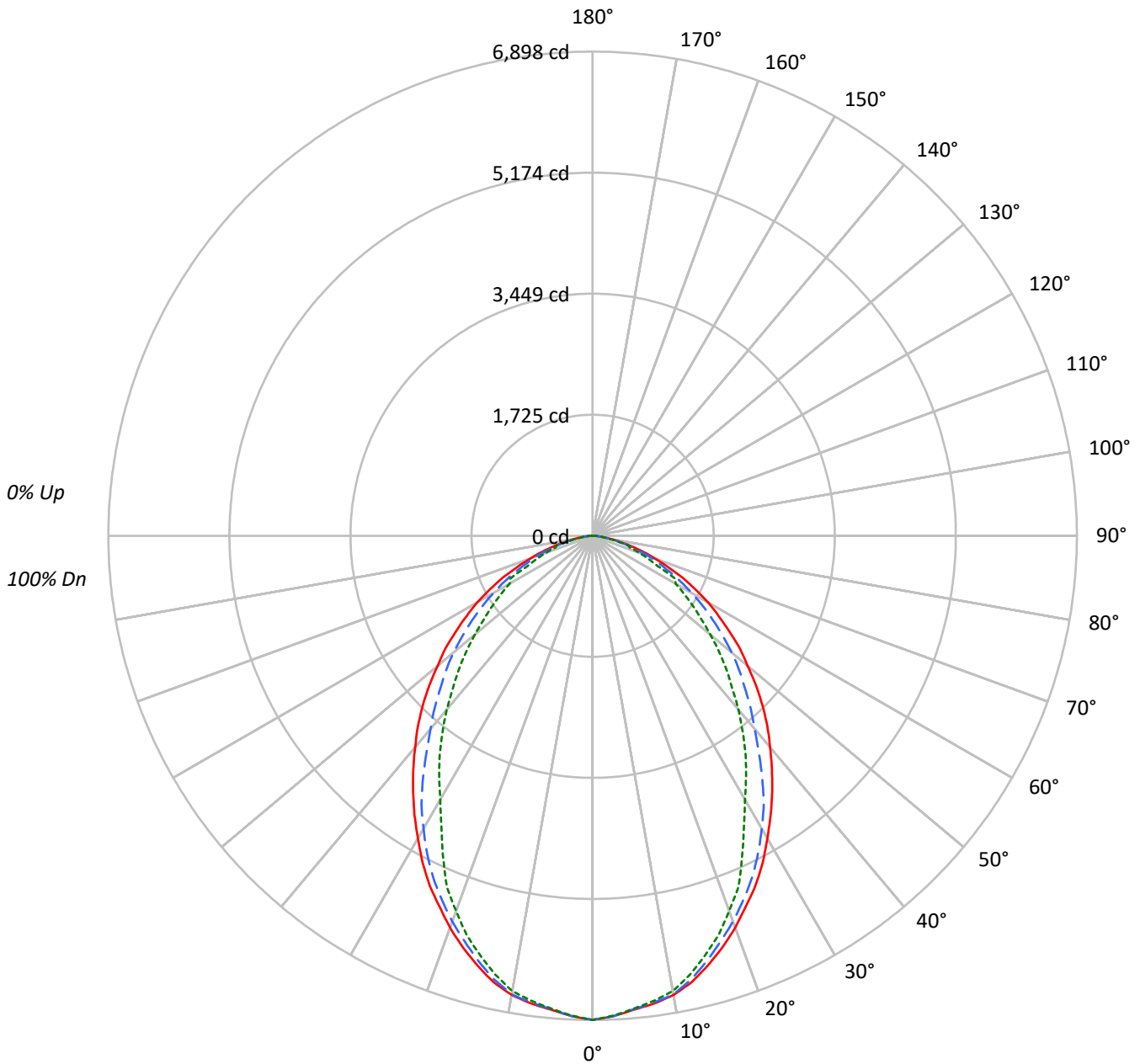
Lumens per Lamp: N/A
Luminaire Lumens: 13541.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	9281	9281	9281
5°	9155	9144	9133
10°	9075	9064	8999
15°	8830	8742	8619
20°	8506	8369	8141
25°	8157	7979	7482
30°	7731	7483	6740
35°	7322	6916	6235
40°	6905	6303	5672
45°	6509	5827	5128
50°	6026	5408	4573
55°	5574	4901	4096
60°	5107	4377	3669
65°	4493	3833	3250
70°	3701	3356	2760
75°	2943	2570	2694
80°	1977	1853	1730
85°	1230	1477	1723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	642.1	4.7
10°-20°	1762.1	13.0
20°-30°	2439.5	18.0
30°-40°	2601.3	19.2
40°-50°	2373.1	17.5
50°-60°	1859.1	13.7
60°-70°	1211.7	8.9
70°-80°	536.8	4.0
80°-90°	115.3	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°	4843.7	35.8
0°-40°	7445.0	55.0
0°-60°	11677.2	86.2
0°-90°	13541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13541.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6898	6898	6898	6898	6898	
5°	6778	6770	6770	6762	6762	643
15°	6339	6339	6276	6212	6188	1782
25°	5494	5462	5374	5183	5040	2522
35°	4458	4426	4210	3891	3796	2787
45°	3421	3349	3062	2807	2695	2635
55°	2376	2304	2089	1842	1746	2131
65°	1411	1332	1204	1228	1021	1391
75°	566	526	494	470	518	607
85°	80	88	96	104	112	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6897.6	6897.6	6897.6	6897.6	6897.6
2.5°	6849.8	6849.8	6849.8	6841.8	6841.8
5°	6778.0	6770.0	6770.0	6762.0	6762.0
7.5°	6722.2	6714.2	6706.2	6698.3	6682.3
10°	6642.4	6642.4	6634.5	6594.6	6586.6
12.5°	6514.8	6506.9	6475.0	6419.2	6403.2
15°	6339.4	6339.4	6275.6	6211.8	6187.9
17.5°	6148.0	6140.1	6060.3	5996.5	5964.6
20°	5940.7	5924.8	5845.0	5741.4	5685.5
22.5°	5709.5	5709.5	5613.8	5478.2	5422.4
25°	5494.2	5462.3	5374.5	5183.2	5039.6
27.5°	5247.0	5199.1	5103.4	4832.3	4664.9
30°	4975.8	4951.9	4816.4	4465.5	4337.9
32.5°	4720.7	4680.8	4537.3	4170.5	4066.8
35°	4457.5	4425.6	4210.3	3891.4	3795.7
37.5°	4194.4	4154.5	3883.4	3628.2	3508.6
40°	3931.2	3883.4	3588.3	3357.1	3229.5
42.5°	3684.0	3620.2	3333.2	3086.0	2942.4
45°	3420.9	3349.1	3062.1	2806.9	2695.2
47.5°	3157.7	3094.0	2830.8	2567.7	2440.1
50°	2878.7	2822.8	2583.6	2320.5	2184.9
52.5°	2647.4	2559.7	2328.4	2065.3	1953.7
55°	2376.3	2304.5	2089.2	1842.0	1746.3
57.5°	2129.1	2057.3	1858.0	1626.7	1547.0
60°	1897.8	1794.2	1626.7	1427.4	1363.6
62.5°	1642.7	1562.9	1419.4	1251.9	1331.7
65°	1411.4	1331.7	1204.1	1228.0	1020.7
67.5°	1156.2	1116.4	1004.7	893.1	861.2
70°	940.9	893.1	853.2	733.6	701.7
72.5°	749.6	701.7	645.9	582.1	558.2
75°	566.2	526.3	494.4	470.5	518.3
77.5°	390.7	374.8	350.9	326.9	319.0
80°	255.2	247.2	239.2	231.2	223.3
82.5°	151.5	151.5	151.5	151.5	151.5
85°	79.7	87.7	95.7	103.7	111.6
87.5°	47.8	47.8	55.8	63.8	71.8
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)