

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: P547190

Luminaire Tested: **FMR-24-4-LD4-3STD-35-UNV-93-97-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: P547190
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-LD4-3STD-35-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

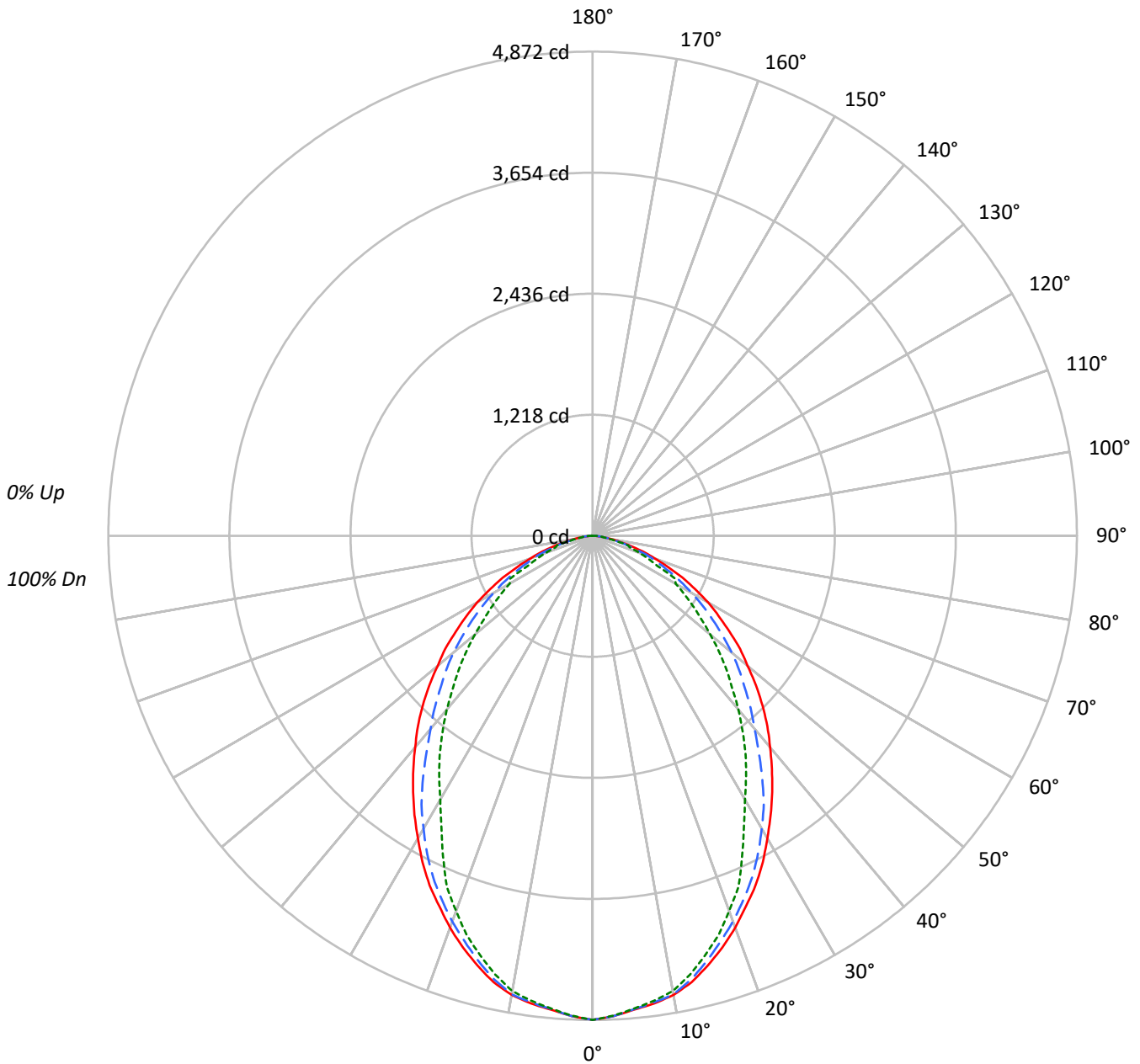
Lumens per Lamp: N/A
Luminaire Lumens: 9564.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (A_{in}): 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°	6555	6555	6555
5°	6466	6458	6451
10°	6410	6402	6356
15°	6237	6174	6088
20°	6008	5911	5750
25°	5761	5635	5284
30°	5460	5285	4760
35°	5171	4885	4403
40°	4877	4451	4006
45°	4598	4115	3622
50°	4256	3820	3230
55°	3937	3461	2893
60°	3607	3092	2592
65°	3174	2707	2295
70°	2615	2371	1950
75°	2079	1815	1903
80°	1396	1309	1222
85°	869	1044	1216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	453.5	4.7
10°-20°	1244.6	13.0
20°-30°	1723.0	18.0
30°-40°	1837.3	19.2
40°-50°	1676.1	17.5
50°-60°	1313.1	13.7
60°-70°	855.8	8.9
70°-80°	379.2	4.0
80°-90°	81.4	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°	3421.1	35.8
0°-40°	5258.4	55.0
0°-60°	8247.6	86.2
0°-90°	9564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4872	4872	4872	4872	4872	
5°	4787	4782	4782	4776	4776	454
15°	4478	4478	4432	4387	4370	1259
25°	3880	3858	3796	3661	3560	1782
35°	3148	3126	2974	2748	2681	1968
45°	2416	2366	2163	1982	1904	1861
55°	1678	1628	1476	1301	1233	1505
65°	997	941	850	867	721	982
75°	400	372	349	332	366	429
85°	56	62	68	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4871.8	4871.8	4871.8	4871.8	4871.8
2.5°	4838.0	4838.0	4838.0	4832.3	4832.3
5°	4787.3	4781.7	4781.7	4776.0	4776.0
7.5°	4747.9	4742.2	4736.6	4731.0	4719.7
10°	4691.5	4691.5	4685.9	4657.8	4652.1
12.5°	4601.4	4595.8	4573.3	4533.8	4522.6
15°	4477.5	4477.5	4432.5	4387.4	4370.5
17.5°	4342.4	4336.7	4280.4	4235.3	4212.8
20°	4195.9	4184.7	4128.3	4055.1	4015.7
22.5°	4032.6	4032.6	3965.0	3869.3	3829.8
25°	3880.5	3858.0	3796.0	3660.9	3559.5
27.5°	3705.9	3672.1	3604.5	3413.1	3294.8
30°	3514.4	3497.5	3401.8	3154.0	3063.9
32.5°	3334.2	3306.0	3204.7	2945.6	2872.4
35°	3148.3	3125.8	2973.8	2748.5	2680.9
37.5°	2962.5	2934.3	2742.8	2562.6	2478.1
40°	2776.6	2742.8	2534.4	2371.1	2281.0
42.5°	2602.0	2557.0	2354.2	2179.6	2078.2
45°	2416.2	2365.5	2162.7	1982.5	1903.7
47.5°	2230.3	2185.3	1999.4	1813.5	1723.4
50°	2033.2	1993.8	1824.8	1638.9	1543.2
52.5°	1869.9	1807.9	1644.6	1458.7	1379.9
55°	1678.4	1627.7	1475.6	1301.0	1233.4
57.5°	1503.8	1453.1	1312.3	1149.0	1092.6
60°	1340.4	1267.2	1149.0	1008.1	963.1
62.5°	1160.2	1103.9	1002.5	884.2	940.6
65°	996.9	940.6	850.4	867.3	720.9
67.5°	816.7	788.5	709.6	630.8	608.3
70°	664.6	630.8	602.6	518.2	495.6
72.5°	529.4	495.6	456.2	411.1	394.2
75°	399.9	371.7	349.2	332.3	366.1
77.5°	276.0	264.7	247.8	230.9	225.3
80°	180.2	174.6	169.0	163.3	157.7
82.5°	107.0	107.0	107.0	107.0	107.0
85°	56.3	62.0	67.6	73.2	78.8
87.5°	33.8	33.8	39.4	45.1	50.7
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)