

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: P547359

Luminaire Tested: **FMR-24-4-LD4-4LO-35-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: P547359
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-LD4-4LO-35-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

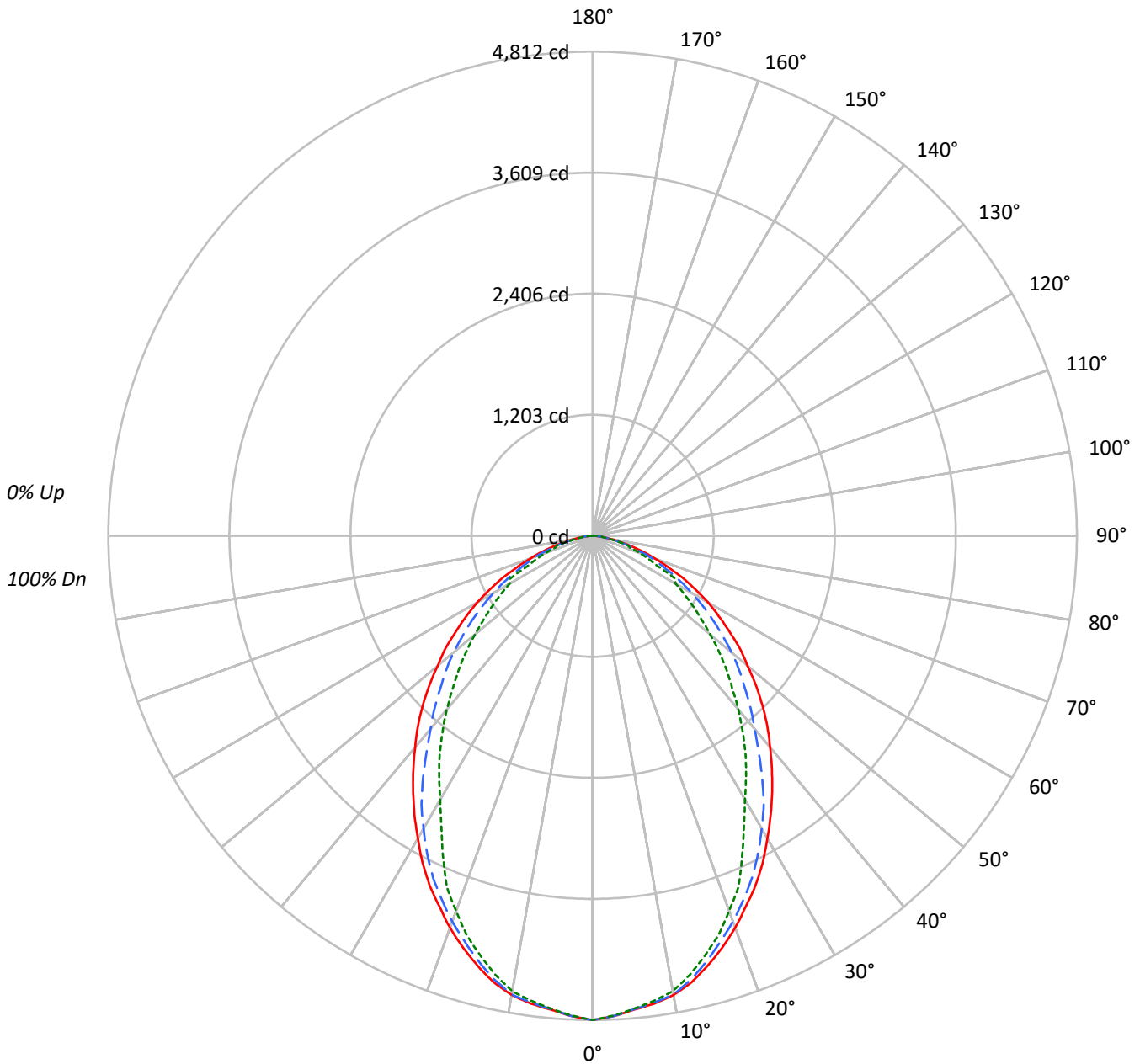
Lumens per Lamp: N/A
Luminaire Lumens: 9447.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6475	6475	6475
5°	6387	6379	6372
10°	6331	6324	6278
15°	6161	6099	6014
20°	5934	5839	5680
25°	5691	5567	5220
30°	5393	5221	4702
35°	5108	4825	4350
40°	4817	4397	3957
45°	4541	4065	3578
50°	4204	3773	3191
55°	3889	3419	2858
60°	3563	3054	2560
65°	3135	2674	2267
70°	2583	2342	1926
75°	2053	1793	1880
80°	1379	1293	1207
85°	858	1031	1203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	447.9	4.7
10°-20°	1229.4	13.0
20°-30°	1702.0	18.0
30°-40°	1814.8	19.2
40°-50°	1655.6	17.5
50°-60°	1297.0	13.7
60°-70°	845.4	8.9
70°-80°	374.5	4.0
80°-90°	80.4	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°	3379.3	35.8
0°-40°	5194.1	55.0
0°-60°	8146.7	86.2
0°-90°	9447.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9447.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4812	4812	4812	4812	4812	
5°	4729	4723	4723	4718	4718	449
15°	4423	4423	4378	4334	4317	1243
25°	3833	3811	3750	3616	3516	1760
35°	3110	3088	2937	2715	2648	1944
45°	2387	2336	2136	1958	1880	1838
55°	1658	1608	1458	1285	1218	1487
65°	985	929	840	857	712	970
75°	395	367	345	328	362	423
85°	56	61	67	72	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4812.2	4812.2	4812.2	4812.2	4812.2
2.5°	4778.8	4778.8	4778.8	4773.2	4773.2
5°	4728.7	4723.2	4723.2	4717.6	4717.6
7.5°	4689.8	4684.2	4678.7	4673.1	4662.0
10°	4634.2	4634.2	4628.6	4600.8	4595.2
12.5°	4545.1	4539.6	4517.3	4478.4	4467.3
15°	4422.8	4422.8	4378.2	4333.7	4317.1
17.5°	4289.2	4283.7	4228.0	4183.5	4161.3
20°	4144.6	4133.5	4077.8	4005.5	3966.6
22.5°	3983.3	3983.3	3916.5	3821.9	3783.0
25°	3833.1	3810.8	3749.6	3616.1	3515.9
27.5°	3660.6	3627.2	3560.5	3371.3	3254.5
30°	3471.4	3454.8	3360.2	3115.4	3026.4
32.5°	3293.4	3265.6	3165.5	2909.6	2837.2
35°	3109.8	3087.6	2937.4	2714.8	2648.1
37.5°	2926.2	2898.4	2709.3	2531.3	2447.8
40°	2742.7	2709.3	2503.4	2342.1	2253.1
42.5°	2570.2	2525.7	2325.4	2153.0	2052.8
45°	2386.6	2336.5	2136.3	1958.2	1880.4
47.5°	2203.0	2158.5	1974.9	1791.4	1702.3
50°	2008.3	1969.4	1802.5	1618.9	1524.3
52.5°	1847.0	1785.8	1624.5	1440.9	1363.0
55°	1657.8	1607.8	1457.6	1285.1	1218.3
57.5°	1485.4	1435.3	1296.2	1134.9	1079.3
60°	1324.0	1251.7	1134.9	995.8	951.3
62.5°	1146.0	1090.4	990.3	873.4	929.1
65°	984.7	929.1	840.0	856.7	712.1
67.5°	806.7	778.8	701.0	623.1	600.8
70°	656.5	623.1	595.3	511.8	489.6
72.5°	522.9	489.6	450.6	406.1	389.4
75°	395.0	367.2	344.9	328.2	361.6
77.5°	272.6	261.5	244.8	228.1	222.5
80°	178.0	172.5	166.9	161.3	155.8
82.5°	105.7	105.7	105.7	105.7	105.7
85°	55.6	61.2	66.8	72.3	77.9
87.5°	33.4	33.4	38.9	44.5	50.1
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)