

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: P546699

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-82-88-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: P546699
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-LD4-2HI-35-UNV-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

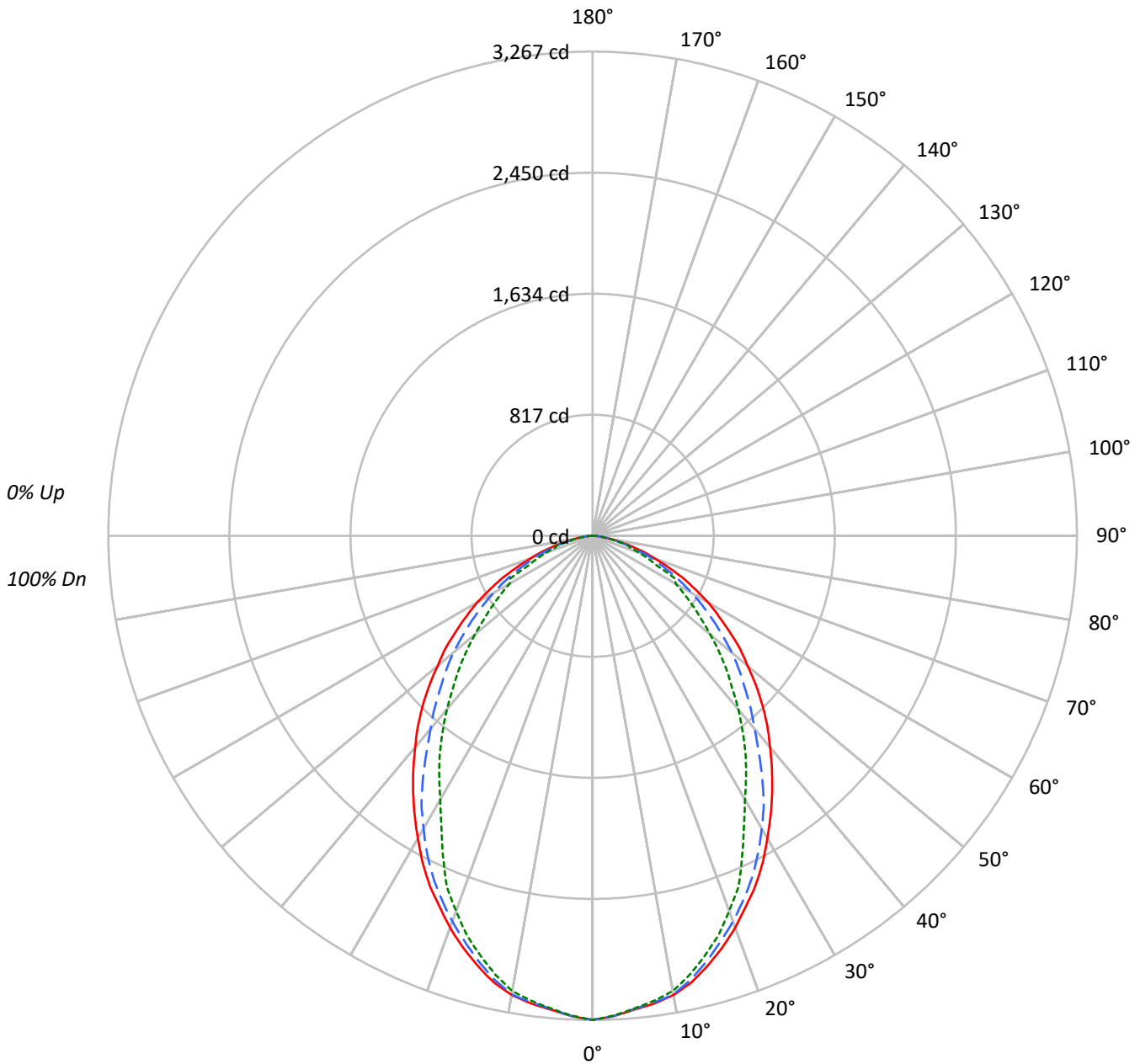
Lumens per Lamp: N/A
Luminaire Lumens: 6413.0 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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				20				
RC	80				70				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			100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4395	4395	4395
5°	4336	4331	4325
10°	4298	4293	4262
15°	4182	4140	4082
20°	4028	3964	3856
25°	3863	3779	3543
30°	3661	3544	3192
35°	3468	3275	2953
40°	3270	2985	2686
45°	3083	2759	2429
50°	2854	2561	2166
55°	2640	2321	1940
60°	2419	2073	1738
65°	2128	1816	1539
70°	1753	1590	1307
75°	1394	1217	1276
80°	936	878	819
85°	584	699	817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.1	4.7
10°-20°	834.5	13.0
20°-30°	1155.4	18.0
30°-40°	1231.9	19.2
40°-50°	1123.9	17.5
50°-60°	880.5	13.7
60°-70°	573.9	8.9
70°-80°	254.2	4.0
80°-90°	54.6	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°	2294.0	35.8
0°-40°	3525.9	55.0
0°-60°	5530.3	86.2
0°-90°	6413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3267	3267	3267	3267	3267	
5°	3210	3206	3206	3202	3202	305
15°	3002	3002	2972	2942	2931	844
25°	2602	2587	2545	2455	2387	1195
35°	2111	2096	1994	1843	1798	1320
45°	1620	1586	1450	1329	1276	1248
55°	1125	1091	990	872	827	1009
65°	668	631	570	582	483	659
75°	268	249	234	223	246	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3266.7	3266.7	3266.7	3266.7	3266.7
2.5°	3244.0	3244.0	3244.0	3240.3	3240.3
5°	3210.0	3206.3	3206.3	3202.5	3202.5
7.5°	3183.6	3179.8	3176.1	3172.3	3164.7
10°	3145.8	3145.8	3142.1	3123.2	3119.4
12.5°	3085.4	3081.6	3066.5	3040.1	3032.6
15°	3002.3	3002.3	2972.1	2941.9	2930.6
17.5°	2911.7	2907.9	2870.2	2839.9	2824.8
20°	2813.5	2806.0	2768.2	2719.1	2692.7
22.5°	2704.0	2704.0	2658.7	2594.5	2568.0
25°	2602.0	2586.9	2545.4	2454.7	2386.8
27.5°	2485.0	2462.3	2417.0	2288.6	2209.3
30°	2356.6	2345.2	2281.0	2114.9	2054.4
32.5°	2235.7	2216.8	2148.8	1975.1	1926.0
35°	2111.1	2096.0	1994.0	1842.9	1797.6
37.5°	1986.5	1967.6	1839.2	1718.3	1661.7
40°	1861.8	1839.2	1699.4	1589.9	1529.5
42.5°	1744.8	1714.5	1578.6	1461.5	1393.5
45°	1620.1	1586.1	1450.2	1329.3	1276.5
47.5°	1495.5	1465.3	1340.7	1216.0	1155.6
50°	1363.3	1336.9	1223.6	1099.0	1034.8
52.5°	1253.8	1212.3	1102.7	978.1	925.2
55°	1125.4	1091.4	989.5	872.4	827.1
57.5°	1008.3	974.3	879.9	770.4	732.6
60°	898.8	849.7	770.4	676.0	645.8
62.5°	778.0	740.2	672.2	592.9	630.7
65°	668.4	630.7	570.3	581.6	483.4
67.5°	547.6	528.7	475.8	423.0	407.9
70°	445.6	423.0	404.1	347.4	332.3
72.5°	355.0	332.3	305.9	275.7	264.4
75°	268.1	249.3	234.1	222.8	245.5
77.5°	185.0	177.5	166.2	154.8	151.1
80°	120.8	117.1	113.3	109.5	105.7
82.5°	71.8	71.8	71.8	71.8	71.8
85°	37.8	41.5	45.3	49.1	52.9
87.5°	22.7	22.7	26.4	30.2	34.0
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)