

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: P588743

Luminaire Tested: **FMR-24-2-LD4-1HI-40-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588743
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-1HI-40-UNV-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

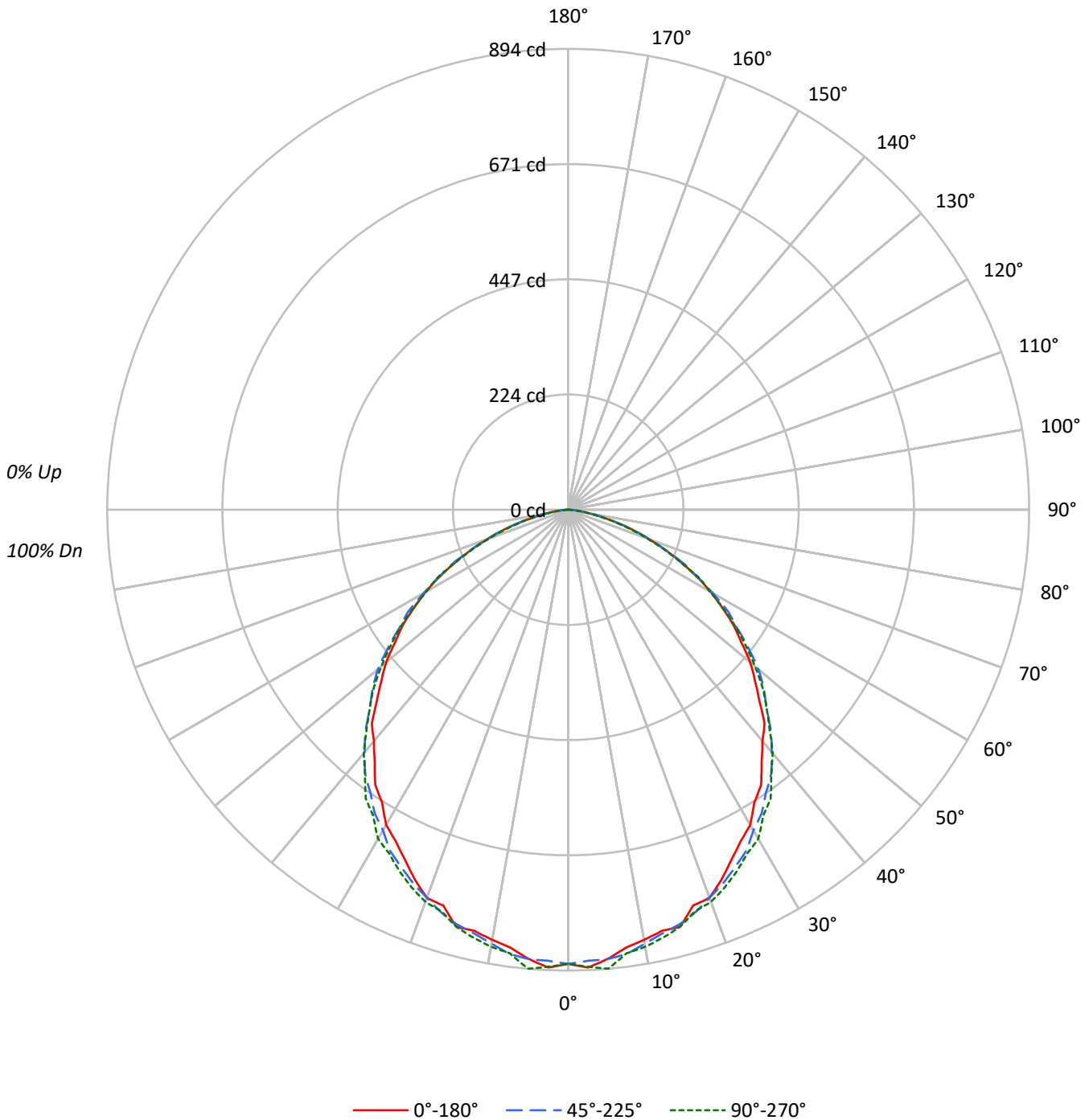
Lumens per Lamp: N/A
Luminaire Lumens: 2221.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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				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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2371	2371	2371
5°	2364	2364	2414
10°	2316	2336	2352
15°	2334	2321	2334
20°	2294	2294	2319
25°	2224	2273	2298
30°	2193	2232	2291
35°	2142	2198	2247
40°	2059	2158	2167
45°	1996	2067	2070
50°	1931	2018	1979
55°	1840	1875	1862
60°	1720	1737	1706
65°	1534	1573	1523
70°	1316	1320	1284
75°	1042	1040	999
80°	699	679	652
85°	380	377	352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.9	3.7
10°-20°	234.9	10.6
20°-30°	352.0	15.8
30°-40°	417.2	18.8
40°-50°	417.9	18.8
50°-60°	354.8	16.0
60°-70°	239.2	10.8
70°-80°	105.1	4.7
80°-90°	17.1	0.8
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°	669.8	30.2
0°-40°	1087.0	48.9
0°-60°	1859.7	83.7
0°-90°	2221.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2221.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	875	873	875	873	894	82
15°	838	828	833	838	838	233
25°	749	753	765	775	774	346
35°	652	654	669	684	684	405
45°	524	534	543	557	544	406
55°	392	390	400	397	397	349
65°	241	238	247	238	239	240
75°	100	98	100	93	96	107
85°	12	12	12	12	11	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	881.2	881.2	881.2	881.2	881.2
2.5°	888.9	882.1	875.9	883.2	887.6
5°	875.0	872.9	875.3	872.7	893.8
7.5°	857.0	864.9	869.4	866.6	867.8
10°	847.4	844.7	854.8	861.9	860.9
12.5°	837.2	841.3	841.9	849.5	850.2
15°	837.8	828.1	833.2	837.5	837.9
17.5°	805.2	815.7	819.2	829.1	816.8
20°	801.2	793.6	801.2	811.4	809.8
22.5°	776.8	768.3	784.6	793.6	793.1
25°	749.0	753.1	765.4	775.4	773.8
27.5°	724.7	729.5	747.0	760.7	751.9
30°	705.9	703.5	718.3	730.6	737.4
32.5°	672.3	681.0	698.3	710.5	704.0
35°	652.0	653.9	669.0	684.5	684.1
37.5°	616.4	625.3	646.6	650.9	647.0
40°	586.0	595.0	614.2	618.9	616.9
42.5°	563.6	565.2	581.7	587.0	578.5
45°	524.5	534.3	543.2	557.2	544.0
47.5°	491.3	495.9	515.0	518.7	511.8
50°	461.2	462.7	482.0	477.3	472.8
52.5°	423.3	430.0	440.8	439.9	434.5
55°	392.1	389.5	399.7	397.0	396.9
57.5°	354.7	359.2	367.6	363.3	356.4
60°	319.6	319.7	322.8	317.9	317.0
62.5°	280.6	282.0	282.6	276.6	286.4
65°	240.9	237.7	247.0	237.6	239.2
67.5°	204.4	205.9	205.0	199.1	201.4
70°	167.3	169.3	167.8	161.1	163.2
72.5°	133.4	130.8	132.4	124.0	127.9
75°	100.2	98.2	100.0	93.0	96.1
77.5°	68.3	69.9	68.7	65.0	67.1
80°	45.1	43.8	43.8	41.6	42.1
82.5°	26.3	25.0	24.7	24.0	25.0
85°	12.3	11.9	12.2	11.8	11.4
87.5°	4.4	4.6	4.6	4.3	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)