

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: P546698

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-82-87-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: P546698
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-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

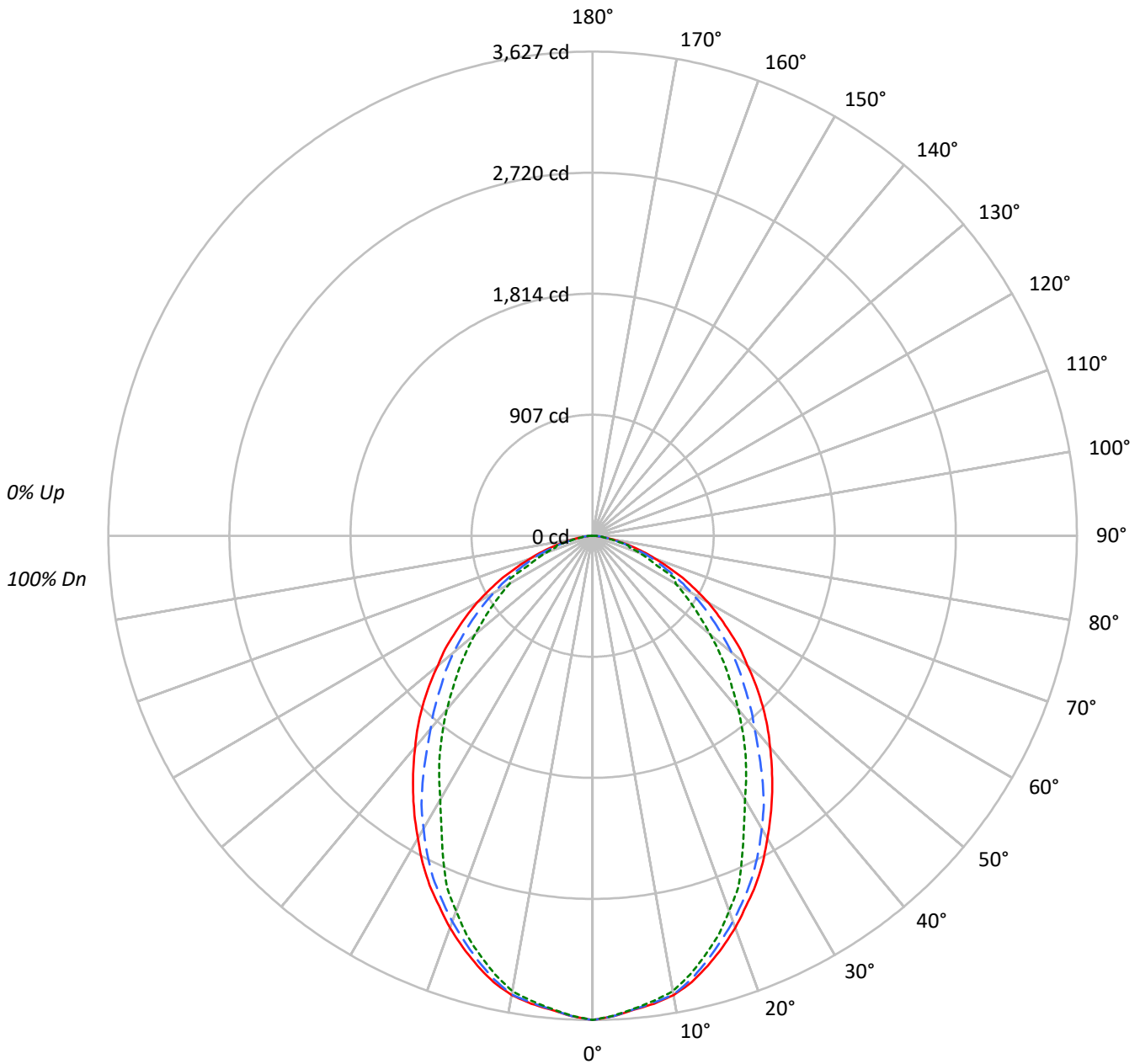
Lumens per Lamp: N/A
Luminaire Lumens: 7121.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	4880	4880	4880
5°	4814	4809	4803
10°	4773	4767	4732
15°	4644	4597	4533
20°	4473	4401	4281
25°	4289	4196	3935
30°	4065	3935	3544
35°	3850	3637	3279
40°	3631	3315	2983
45°	3423	3064	2697
50°	3169	2844	2405
55°	2932	2577	2154
60°	2686	2302	1930
65°	2363	2016	1709
70°	1947	1765	1452
75°	1548	1352	1417
80°	1040	975	910
85°	647	777	906



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.7	4.7
10°-20°	926.7	13.0
20°-30°	1282.9	18.0
30°-40°	1368.0	19.2
40°-50°	1248.0	17.5
50°-60°	977.7	13.7
60°-70°	637.2	8.9
70°-80°	282.3	4.0
80°-90°	60.6	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°	2547.2	35.8
0°-40°	3915.2	55.0
0°-60°	6140.9	86.2
0°-90°	7121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3627	3627	3627	3627	3627	
5°	3564	3560	3560	3556	3556	338
15°	3334	3334	3300	3267	3254	937
25°	2889	2872	2826	2726	2650	1326
35°	2344	2327	2214	2046	1996	1466
45°	1799	1761	1610	1476	1417	1386
55°	1250	1212	1099	969	918	1121
65°	742	700	633	646	537	731
75°	298	277	260	247	273	319
85°	42	46	50	54	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3627.3	3627.3	3627.3	3627.3	3627.3
2.5°	3602.2	3602.2	3602.2	3598.0	3598.0
5°	3564.4	3560.2	3560.2	3556.1	3556.1
7.5°	3535.1	3530.9	3526.7	3522.5	3514.1
10°	3493.2	3493.2	3489.0	3468.0	3463.8
12.5°	3426.1	3421.9	3405.1	3375.7	3367.3
15°	3333.8	3333.8	3300.3	3266.7	3254.1
17.5°	3233.2	3229.0	3187.0	3153.5	3136.7
20°	3124.1	3115.7	3073.8	3019.3	2989.9
22.5°	3002.5	3002.5	2952.2	2880.9	2851.6
25°	2889.3	2872.5	2826.4	2725.7	2650.3
27.5°	2759.3	2734.1	2683.8	2541.2	2453.2
30°	2616.7	2604.1	2532.8	2348.3	2281.2
32.5°	2482.5	2461.6	2386.1	2193.2	2138.7
35°	2344.1	2327.4	2214.1	2046.4	1996.1
37.5°	2205.8	2184.8	2042.2	1908.0	1845.1
40°	2067.4	2042.2	1887.1	1765.4	1698.4
42.5°	1937.4	1903.8	1752.9	1622.9	1547.4
45°	1799.0	1761.3	1610.3	1476.1	1417.4
47.5°	1660.6	1627.1	1488.7	1350.3	1283.2
50°	1513.8	1484.5	1358.7	1220.3	1149.0
52.5°	1392.2	1346.1	1224.5	1086.1	1027.4
55°	1249.7	1211.9	1098.7	968.7	918.4
57.5°	1119.7	1081.9	977.1	855.5	813.5
60°	998.0	943.5	855.5	750.6	717.1
62.5°	863.9	821.9	746.4	658.4	700.3
65°	742.2	700.3	633.2	645.8	536.8
67.5°	608.1	587.1	528.4	469.7	452.9
70°	494.8	469.7	448.7	385.8	369.0
72.5°	394.2	369.0	339.7	306.1	293.5
75°	297.7	276.8	260.0	247.4	272.6
77.5°	205.5	197.1	184.5	171.9	167.7
80°	134.2	130.0	125.8	121.6	117.4
82.5°	79.7	79.7	79.7	79.7	79.7
85°	41.9	46.1	50.3	54.5	58.7
87.5°	25.2	25.2	29.4	33.5	37.7
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)