

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: P546904

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-80-85-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: P546904
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-LD4-2STD-40-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

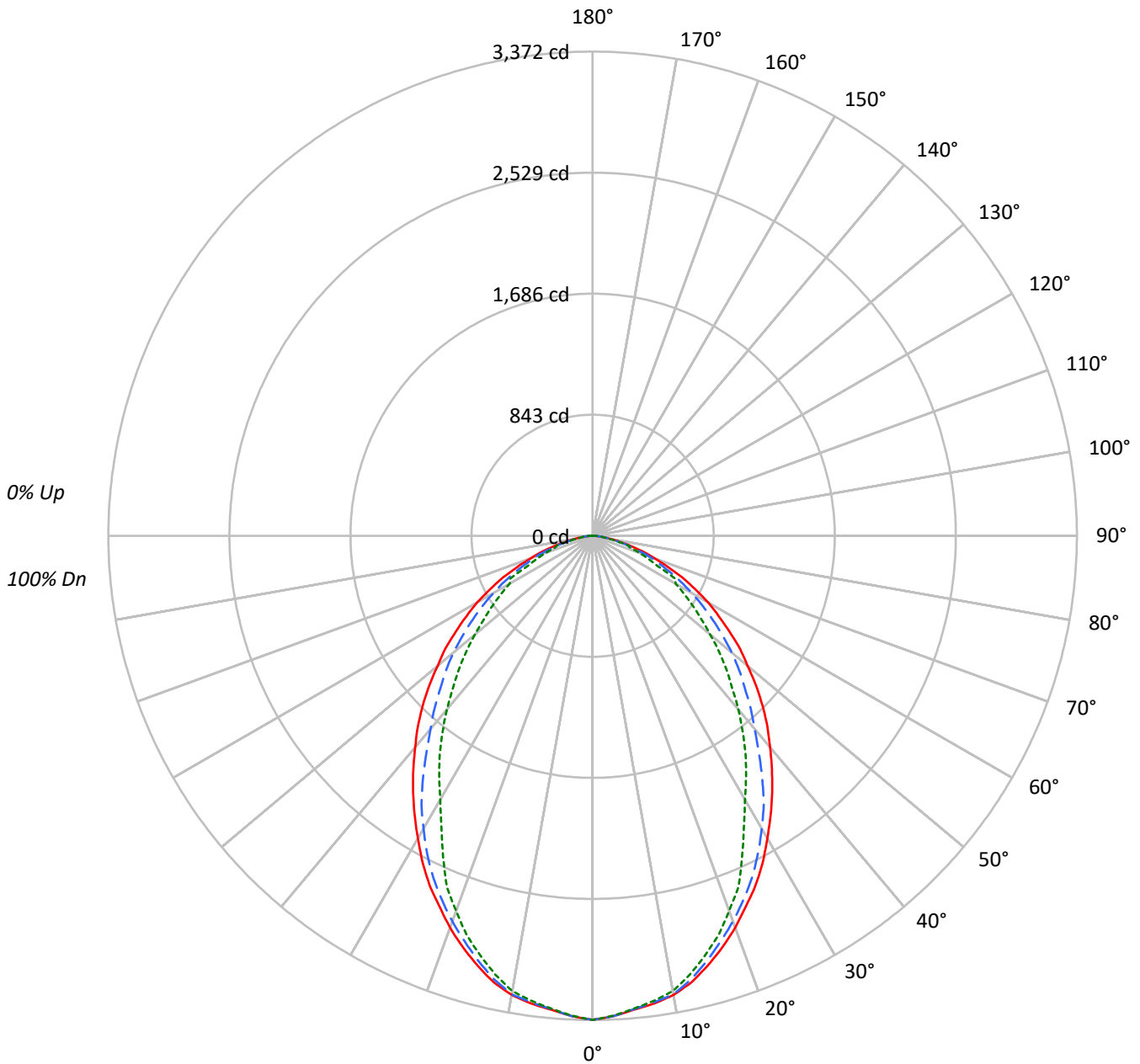
Lumens per Lamp: N/A
Luminaire Lumens: 6619.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4536	4536	4536
5°	4475	4470	4464
10°	4436	4431	4399
15°	4316	4273	4213
20°	4158	4091	3979
25°	3987	3900	3657
30°	3779	3658	3294
35°	3579	3381	3048
40°	3375	3081	2773
45°	3182	2848	2507
50°	2945	2644	2236
55°	2725	2396	2002
60°	2496	2140	1794
65°	2196	1874	1588
70°	1809	1641	1349
75°	1438	1256	1317
80°	966	906	845
85°	602	722	843



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.9	4.7
10°-20°	861.3	13.0
20°-30°	1192.5	18.0
30°-40°	1271.5	19.2
40°-50°	1160.0	17.5
50°-60°	908.8	13.7
60°-70°	592.3	8.9
70°-80°	262.4	4.0
80°-90°	56.4	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°	2367.7	35.8
0°-40°	3639.2	55.0
0°-60°	5708.0	86.2
0°-90°	6619.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6619.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3372	3372	3372	3372	3372	
5°	3313	3309	3309	3305	3305	314
15°	3099	3099	3068	3036	3025	871
25°	2686	2670	2627	2534	2463	1233
35°	2179	2163	2058	1902	1855	1362
45°	1672	1637	1497	1372	1318	1288
55°	1162	1126	1021	900	854	1042
65°	690	651	589	600	499	680
75°	277	257	242	230	253	297
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3371.6	3371.6	3371.6	3371.6	3371.6
2.5°	3348.2	3348.2	3348.2	3344.3	3344.3
5°	3313.2	3309.3	3309.3	3305.4	3305.4
7.5°	3285.9	3282.0	3278.1	3274.2	3266.4
10°	3246.9	3246.9	3243.0	3223.5	3219.6
12.5°	3184.5	3180.6	3165.0	3137.8	3130.0
15°	3098.8	3098.8	3067.6	3036.4	3024.7
17.5°	3005.2	3001.3	2962.4	2931.2	2915.6
20°	2903.9	2896.1	2857.1	2806.4	2779.2
22.5°	2790.9	2790.9	2744.1	2677.8	2650.5
25°	2685.6	2670.0	2627.1	2533.6	2463.4
27.5°	2564.8	2541.4	2494.6	2362.1	2280.2
30°	2432.3	2420.6	2354.3	2182.8	2120.4
32.5°	2307.5	2288.0	2217.9	2038.6	1987.9
35°	2178.9	2163.3	2058.1	1902.1	1855.4
37.5°	2050.3	2030.8	1898.2	1773.5	1715.0
40°	1921.6	1898.2	1754.0	1641.0	1578.6
42.5°	1800.8	1769.6	1629.3	1508.5	1438.3
45°	1672.2	1637.1	1496.8	1372.0	1317.5
47.5°	1543.5	1512.4	1383.7	1255.1	1192.7
50°	1407.1	1379.8	1262.9	1134.3	1068.0
52.5°	1294.1	1251.2	1138.2	1009.5	955.0
55°	1161.6	1126.5	1021.2	900.4	853.6
57.5°	1040.7	1005.6	908.2	795.2	756.2
60°	927.7	877.0	795.2	697.7	666.5
62.5°	803.0	764.0	693.8	612.0	650.9
65°	689.9	650.9	588.6	600.3	498.9
67.5°	565.2	545.7	491.1	436.6	421.0
70°	459.9	436.6	417.1	358.6	343.0
72.5°	366.4	343.0	315.7	284.5	272.8
75°	276.7	257.3	241.7	230.0	253.4
77.5°	191.0	183.2	171.5	159.8	155.9
80°	124.7	120.8	116.9	113.0	109.1
82.5°	74.1	74.1	74.1	74.1	74.1
85°	39.0	42.9	46.8	50.7	54.6
87.5°	23.4	23.4	27.3	31.2	35.1
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)