

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: P546883

Luminaire Tested: **FMR-24-4-LD4-2STD-35-UNV-81-88-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: P546883
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-35-UNV-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 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

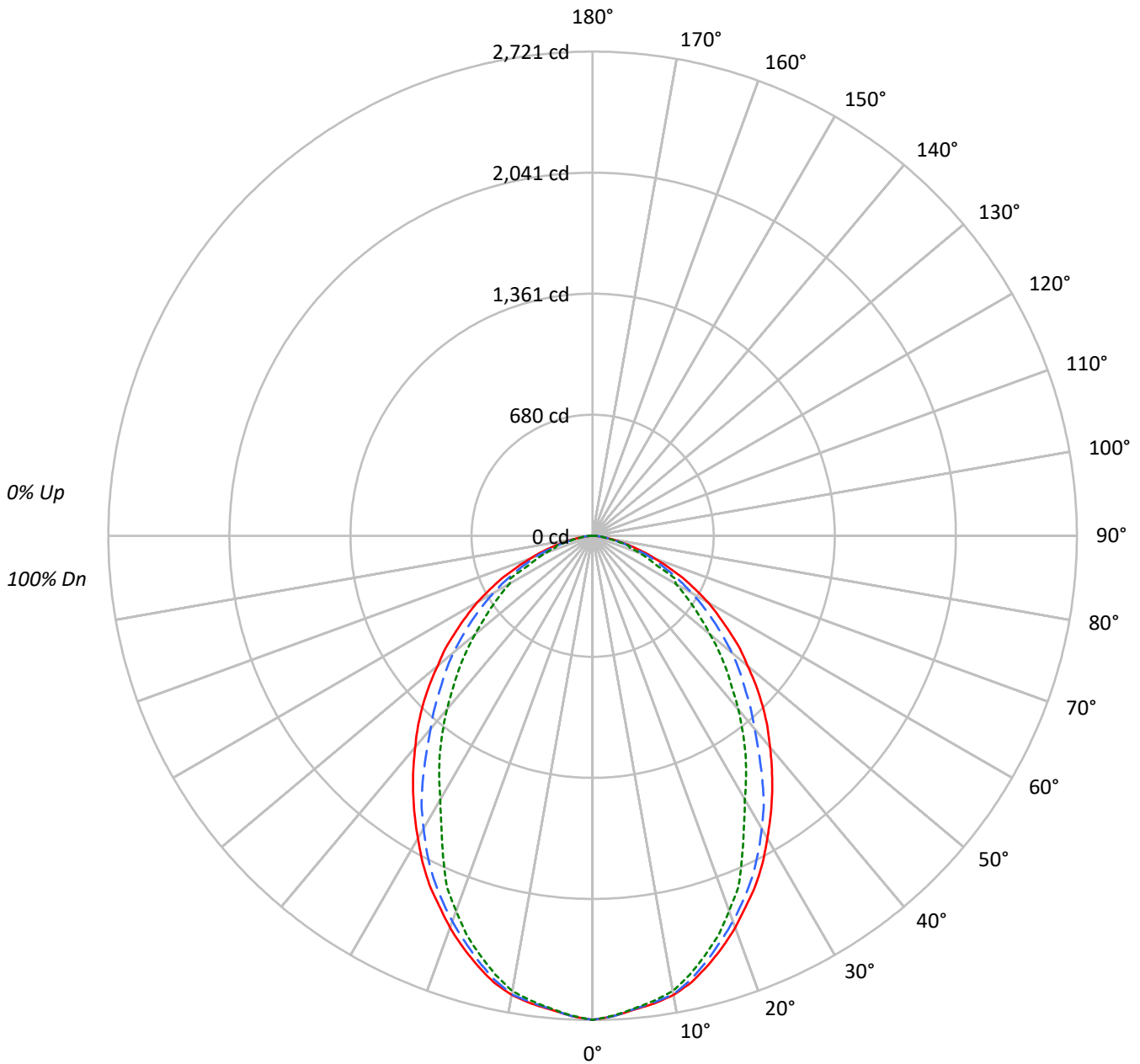
Lumens per Lamp: N/A
Luminaire Lumens: 5341.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3661	3661	3661
5°	3611	3607	3602
10°	3580	3575	3550
15°	3483	3448	3400
20°	3355	3301	3211
25°	3217	3147	2951
30°	3049	2951	2658
35°	2888	2728	2459
40°	2723	2486	2237
45°	2567	2298	2023
50°	2377	2133	1804
55°	2199	1933	1616
60°	2014	1727	1447
65°	1772	1512	1282
70°	1460	1324	1089
75°	1161	1014	1063
80°	779	731	683
85°	486	582	679



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.3	4.7
10°-20°	695.0	13.0
20°-30°	962.2	18.0
30°-40°	1026.0	19.2
40°-50°	936.0	17.5
50°-60°	733.3	13.7
60°-70°	477.9	8.9
70°-80°	211.8	4.0
80°-90°	45.5	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°	1910.5	35.8
0°-40°	2936.5	55.0
0°-60°	4605.9	86.2
0°-90°	5341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2721	2721	2721	2721	2721	
5°	2674	2670	2670	2667	2667	254
15°	2500	2500	2475	2450	2441	703
25°	2167	2154	2120	2044	1988	995
35°	1758	1746	1661	1535	1497	1099
45°	1349	1321	1208	1107	1063	1039
55°	937	909	824	727	689	841
65°	557	525	475	484	403	549
75°	223	208	195	186	204	239
85°	32	35	38	41	44	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2720.6	2720.6	2720.6	2720.6	2720.6
2.5°	2701.8	2701.8	2701.8	2698.6	2698.6
5°	2673.5	2670.3	2670.3	2667.2	2667.2
7.5°	2651.4	2648.3	2645.1	2642.0	2635.7
10°	2620.0	2620.0	2616.8	2601.1	2598.0
12.5°	2569.7	2566.5	2553.9	2531.9	2525.6
15°	2500.5	2500.5	2475.3	2450.1	2440.7
17.5°	2425.0	2421.8	2390.4	2365.2	2352.6
20°	2343.2	2336.9	2305.5	2264.6	2242.6
22.5°	2252.0	2252.0	2214.3	2160.8	2138.8
25°	2167.1	2154.5	2119.9	2044.4	1987.8
27.5°	2069.6	2050.7	2013.0	1906.0	1840.0
30°	1962.6	1953.2	1899.7	1761.3	1711.0
32.5°	1862.0	1846.3	1789.6	1645.0	1604.1
35°	1758.2	1745.6	1660.7	1534.9	1497.1
37.5°	1654.4	1638.7	1531.7	1431.1	1383.9
40°	1550.6	1531.7	1415.4	1324.1	1273.8
42.5°	1453.1	1427.9	1314.7	1217.2	1160.6
45°	1349.3	1321.0	1207.8	1107.1	1063.1
47.5°	1245.5	1220.4	1116.6	1012.8	962.4
50°	1135.4	1113.4	1019.1	915.3	861.8
52.5°	1044.2	1009.6	918.4	814.6	770.6
55°	937.3	909.0	824.1	726.6	688.8
57.5°	839.8	811.5	732.8	641.6	610.2
60°	748.6	707.7	641.6	563.0	537.8
62.5°	647.9	616.5	559.9	493.8	525.3
65°	556.7	525.3	474.9	484.4	402.6
67.5°	456.1	440.3	396.3	352.3	339.7
70°	371.1	352.3	336.5	289.4	276.8
72.5°	295.7	276.8	254.8	229.6	220.2
75°	223.3	207.6	195.0	185.6	204.4
77.5°	154.1	147.8	138.4	129.0	125.8
80°	100.6	97.5	94.4	91.2	88.1
82.5°	59.8	59.8	59.8	59.8	59.8
85°	31.5	34.6	37.7	40.9	44.0
87.5°	18.9	18.9	22.0	25.2	28.3
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)