

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: P546853

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-81-96-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: P546853
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-LD4-2LO-50-UNV-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

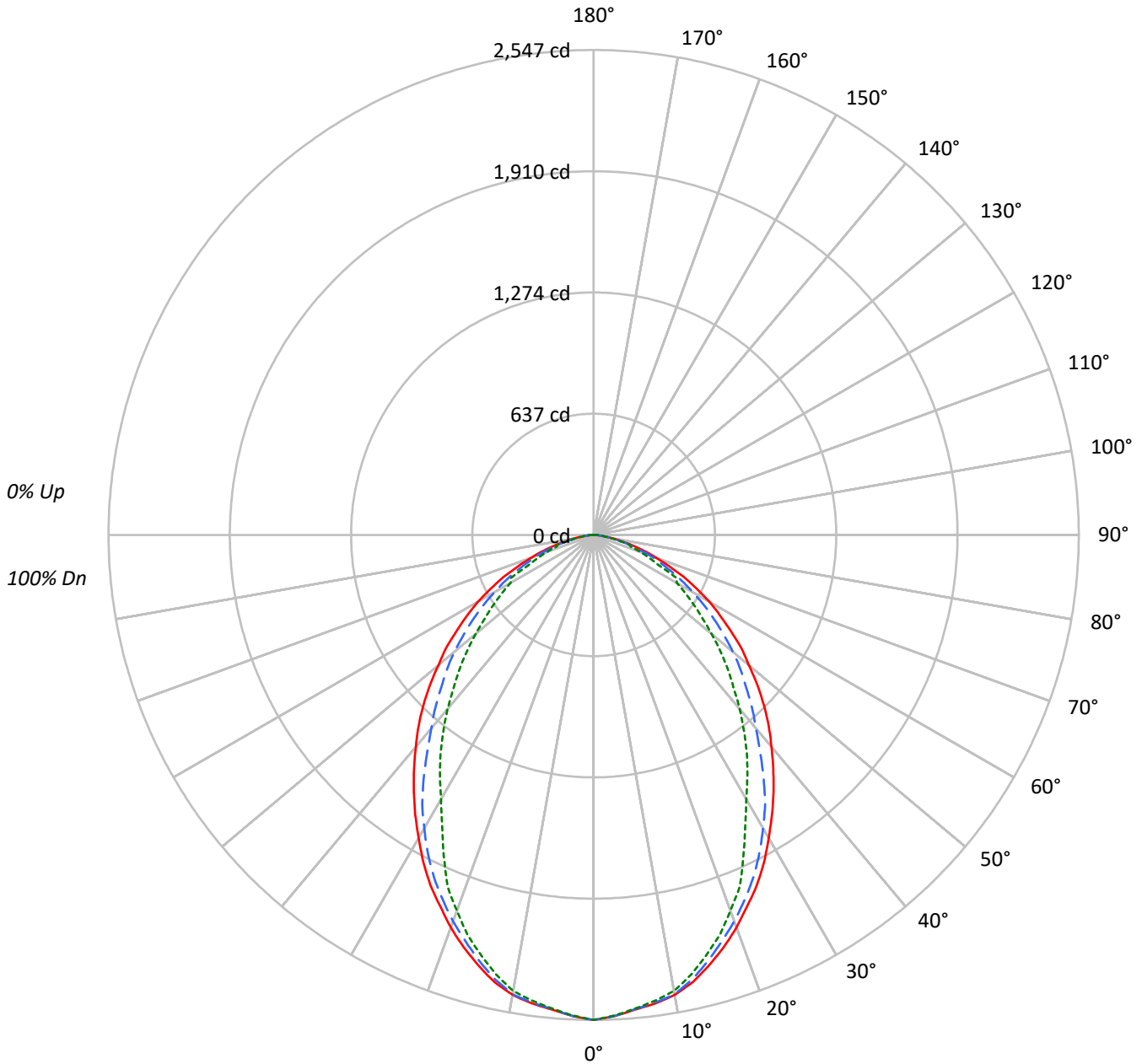
Lumens per Lamp: N/A
Luminaire Lumens: 5000.0 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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

TEST NUMBER: P546853

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-81-96-EDD

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°	3427	3427	3427
5°	3380	3376	3372
10°	3351	3347	3323
15°	3261	3228	3183
20°	3141	3090	3006
25°	3012	2946	2763
30°	2854	2763	2489
35°	2703	2554	2302
40°	2550	2327	2095
45°	2404	2152	1894
50°	2225	1997	1689
55°	2058	1810	1513
60°	1886	1616	1355
65°	1659	1415	1200
70°	1367	1240	1019
75°	1087	949	995
80°	730	684	638
85°	454	545	636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.1	4.7
10°-20°	650.7	13.0
20°-30°	900.8	18.0
30°-40°	960.5	19.2
40°-50°	876.3	17.5
50°-60°	686.5	13.7
60°-70°	447.4	8.9
70°-80°	198.2	4.0
80°-90°	42.5	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°	1788.5	35.8
0°-40°	2749.0	55.0
0°-60°	4311.8	86.2
0°-90°	5000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5000.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2547	2547	2547	2547	2547	
5°	2503	2500	2500	2497	2497	238
15°	2341	2341	2317	2294	2285	658
25°	2029	2017	1984	1914	1861	931
35°	1646	1634	1555	1437	1402	1029
45°	1263	1237	1131	1036	995	973
55°	877	851	771	680	645	787
65°	521	492	445	453	377	514
75°	209	194	183	174	191	224
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2546.9	2546.9	2546.9	2546.9	2546.9
2.5°	2529.3	2529.3	2529.3	2526.3	2526.3
5°	2502.8	2499.8	2499.8	2496.9	2496.9
7.5°	2482.2	2479.2	2476.3	2473.3	2467.4
10°	2452.7	2452.7	2449.8	2435.0	2432.1
12.5°	2405.6	2402.7	2390.9	2370.3	2364.4
15°	2340.8	2340.8	2317.3	2293.7	2284.9
17.5°	2270.2	2267.2	2237.8	2214.2	2202.4
20°	2193.6	2187.7	2158.3	2120.0	2099.4
22.5°	2108.2	2108.2	2072.9	2022.8	2002.2
25°	2028.7	2016.9	1984.5	1913.9	1860.9
27.5°	1937.4	1919.8	1884.4	1784.3	1722.5
30°	1837.3	1828.5	1778.4	1648.9	1601.8
32.5°	1743.1	1728.4	1675.4	1539.9	1501.7
35°	1645.9	1634.2	1554.7	1436.9	1401.5
37.5°	1548.8	1534.0	1433.9	1339.7	1295.5
40°	1451.6	1433.9	1325.0	1239.6	1192.5
42.5°	1360.3	1336.8	1230.8	1139.5	1086.5
45°	1263.2	1236.7	1130.7	1036.4	995.2
47.5°	1166.0	1142.4	1045.3	948.1	901.0
50°	1062.9	1042.3	954.0	856.8	806.8
52.5°	977.6	945.2	859.8	762.6	721.4
55°	877.4	850.9	771.4	680.2	644.8
57.5°	786.2	759.7	686.1	600.7	571.2
60°	700.8	662.5	600.7	527.1	503.5
62.5°	606.6	577.1	524.1	462.3	491.7
65°	521.2	491.7	444.6	453.4	376.9
67.5°	426.9	412.2	371.0	329.8	318.0
70°	347.4	329.8	315.1	270.9	259.1
72.5°	276.8	259.1	238.5	214.9	206.1
75°	209.1	194.3	182.6	173.7	191.4
77.5°	144.3	138.4	129.6	120.7	117.8
80°	94.2	91.3	88.3	85.4	82.4
82.5°	55.9	55.9	55.9	55.9	55.9
85°	29.4	32.4	35.3	38.3	41.2
87.5°	17.7	17.7	20.6	23.6	26.5
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)