

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: P546725

Luminaire Tested: **FMR-24-4-LD4-2HI-40-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: P546725
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

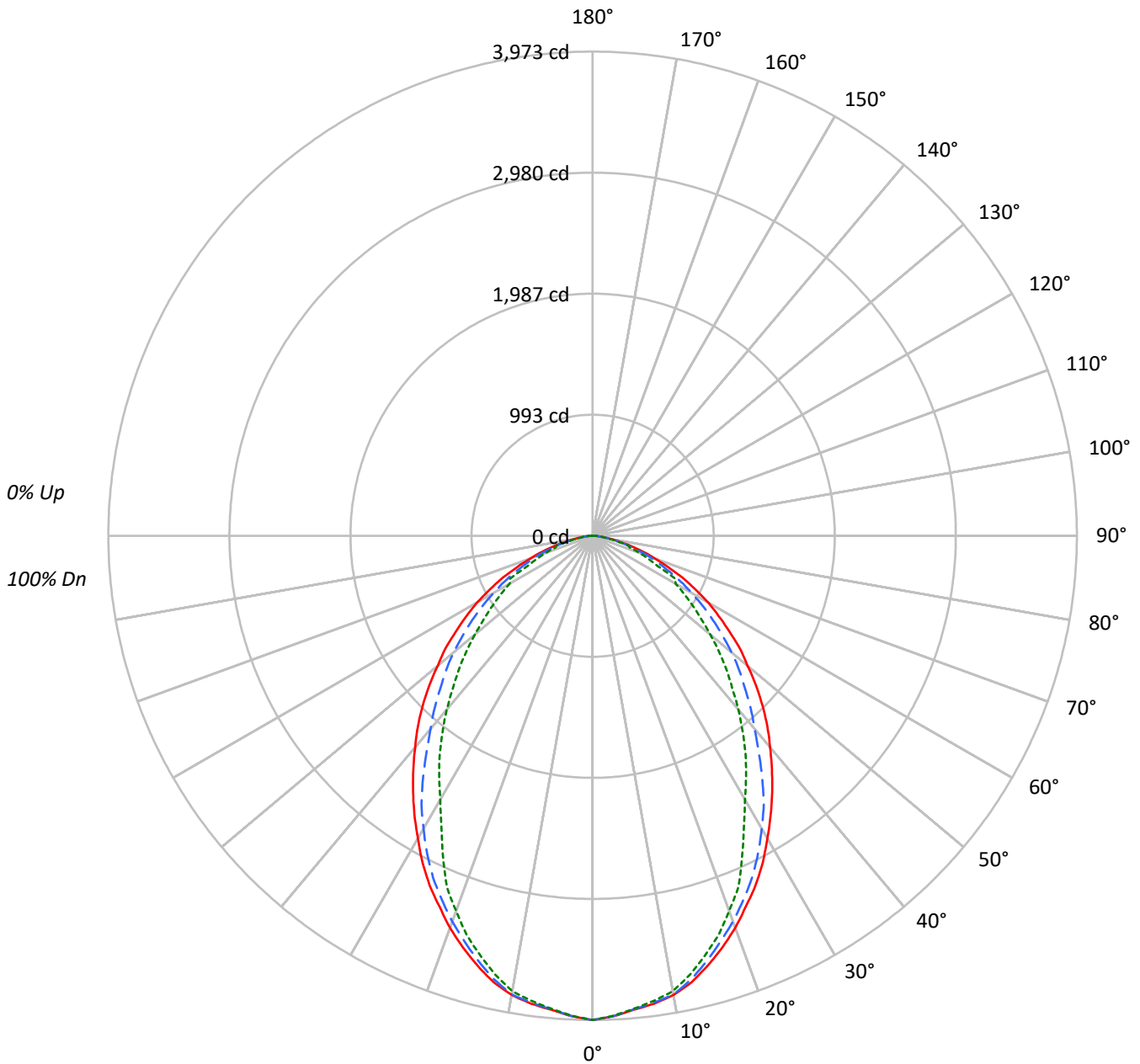
Lumens per Lamp: N/A
Luminaire Lumens: 7800.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5346	5346	5346
5°	5273	5267	5261
10°	5228	5221	5184
15°	5087	5035	4965
20°	4900	4821	4689
25°	4698	4596	4310
30°	4453	4310	3882
35°	4218	3984	3591
40°	3977	3631	3267
45°	3749	3356	2954
50°	3471	3115	2635
55°	3211	2823	2360
60°	2942	2521	2114
65°	2588	2208	1872
70°	2132	1934	1590
75°	1695	1481	1552
80°	1139	1068	996
85°	709	851	993



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	369.9	4.7
10°-20°	1015.0	13.0
20°-30°	1405.2	18.0
30°-40°	1498.4	19.2
40°-50°	1367.0	17.5
50°-60°	1070.9	13.7
60°-70°	698.0	8.9
70°-80°	309.2	4.0
80°-90°	66.4	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°	2790.1	35.8
0°-40°	4288.5	55.0
0°-60°	6726.4	86.2
0°-90°	7800.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7800.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3973	3973	3973	3973	3973	
5°	3904	3900	3900	3895	3895	371
15°	3652	3652	3615	3578	3564	1027
25°	3165	3146	3096	2986	2903	1453
35°	2568	2549	2425	2242	2186	1605
45°	1970	1929	1764	1617	1552	1518
55°	1369	1328	1203	1061	1006	1228
65°	813	767	694	707	588	801
75°	326	303	285	271	299	350
85°	46	50	55	60	64	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3973.2	3973.2	3973.2	3973.2	3973.2
2.5°	3945.7	3945.7	3945.7	3941.1	3941.1
5°	3904.3	3899.7	3899.7	3895.1	3895.1
7.5°	3872.2	3867.6	3863.0	3858.4	3849.2
10°	3826.2	3826.2	3821.6	3798.7	3794.1
12.5°	3752.7	3748.1	3729.8	3697.6	3688.4
15°	3651.7	3651.7	3614.9	3578.2	3564.4
17.5°	3541.4	3536.9	3490.9	3454.2	3435.8
20°	3422.0	3412.8	3366.9	3307.2	3275.0
22.5°	3288.8	3288.8	3233.7	3155.6	3123.5
25°	3164.8	3146.4	3095.9	2985.7	2903.0
27.5°	3022.4	2994.8	2939.7	2783.5	2687.1
30°	2866.2	2852.4	2774.4	2572.3	2498.8
32.5°	2719.2	2696.3	2613.6	2402.3	2342.6
35°	2567.7	2549.3	2425.3	2241.5	2186.4
37.5°	2416.1	2393.1	2236.9	2090.0	2021.1
40°	2264.5	2236.9	2067.0	1933.8	1860.3
42.5°	2122.1	2085.4	1920.0	1777.6	1694.9
45°	1970.5	1929.2	1763.8	1616.8	1552.5
47.5°	1819.0	1782.2	1630.6	1479.0	1405.6
50°	1658.2	1626.0	1488.2	1336.7	1258.6
52.5°	1525.0	1474.5	1341.2	1189.7	1125.4
55°	1368.8	1327.5	1203.4	1061.1	1005.9
57.5°	1226.4	1185.1	1070.2	937.0	891.1
60°	1093.2	1033.5	937.0	822.2	785.5
62.5°	946.2	900.3	817.6	721.2	767.1
65°	813.0	767.1	693.6	707.4	587.9
67.5°	666.0	643.1	578.8	514.5	496.1
70°	542.0	514.5	491.5	422.6	404.2
72.5°	431.8	404.2	372.1	335.3	321.5
75°	326.1	303.2	284.8	271.0	298.6
77.5°	225.1	215.9	202.1	188.3	183.7
80°	147.0	142.4	137.8	133.2	128.6
82.5°	87.3	87.3	87.3	87.3	87.3
85°	45.9	50.5	55.1	59.7	64.3
87.5°	27.6	27.6	32.2	36.7	41.3
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)