

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: P547351

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-80-84-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: P547351
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-LD4-4LO-35-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

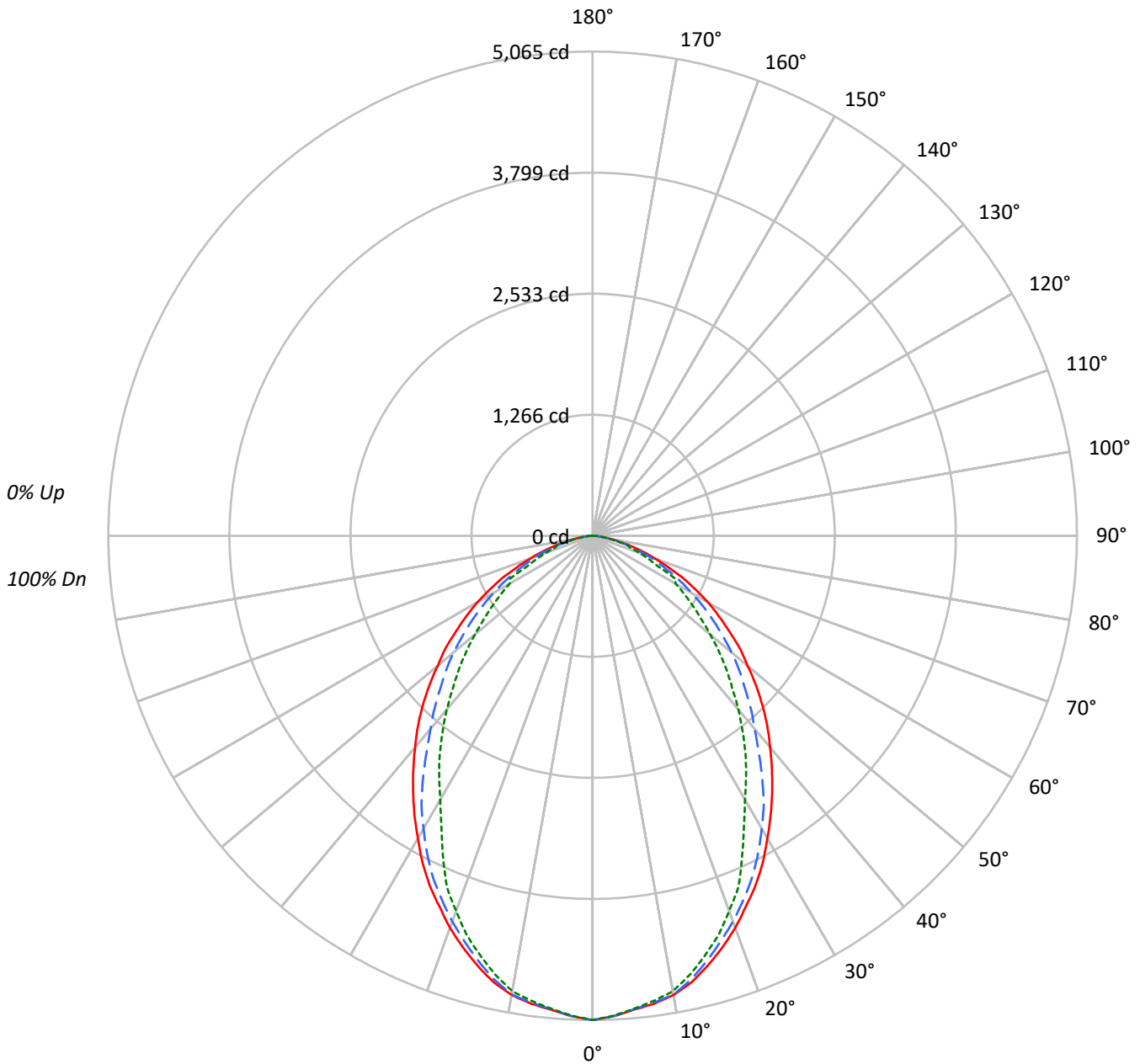
Lumens per Lamp: N/A
Luminaire Lumens: 9944.0 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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

TEST NUMBER: P547351

CATALOG NUMBER: FMR-24-4-LD4-4LO-35-UNV-80-84-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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				100				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6815	6815	6815
5°	6723	6715	6707
10°	6665	6656	6609
15°	6485	6420	6330
20°	6247	6146	5978
25°	5990	5860	5494
30°	5677	5495	4949
35°	5377	5079	4578
40°	5071	4628	4166
45°	4780	4279	3766
50°	4425	3971	3359
55°	4094	3599	3008
60°	3750	3215	2695
65°	3300	2815	2387
70°	2718	2465	2027
75°	2162	1888	1979
80°	1452	1361	1271
85°	905	1085	1266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.5	4.7
10°-20°	1294.0	13.0
20°-30°	1791.5	18.0
30°-40°	1910.3	19.2
40°-50°	1742.7	17.5
50°-60°	1365.3	13.7
60°-70°	889.8	8.9
70°-80°	394.2	4.0
80°-90°	84.6	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°	3557.0	35.8
0°-40°	5467.3	55.0
0°-60°	8575.3	86.2
0°-90°	9944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5065	5065	5065	5065	5065	
5°	4978	4972	4972	4966	4966	472
15°	4655	4655	4609	4562	4544	1309
25°	4035	4011	3947	3806	3701	1852
35°	3273	3250	3092	2858	2787	2046
45°	2512	2460	2249	2061	1979	1935
55°	1745	1692	1534	1353	1282	1565
65°	1036	978	884	902	750	1021
75°	416	386	363	346	381	446
85°	59	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5065.3	5065.3	5065.3	5065.3	5065.3
2.5°	5030.2	5030.2	5030.2	5024.3	5024.3
5°	4977.5	4971.6	4971.6	4965.8	4965.8
7.5°	4936.5	4930.7	4924.8	4918.9	4907.2
10°	4878.0	4878.0	4872.1	4842.8	4837.0
12.5°	4784.3	4778.4	4755.0	4714.0	4702.3
15°	4655.4	4655.4	4608.6	4561.7	4544.2
17.5°	4514.9	4509.0	4450.5	4403.6	4380.2
20°	4362.6	4350.9	4292.4	4216.2	4175.2
22.5°	4192.8	4192.8	4122.5	4023.0	3982.0
25°	4034.7	4011.3	3946.9	3806.3	3700.9
27.5°	3853.2	3818.0	3747.8	3548.7	3425.7
30°	3654.1	3636.5	3537.0	3279.3	3185.6
32.5°	3466.7	3437.4	3332.0	3062.6	2986.5
35°	3273.4	3250.0	3091.9	2857.7	2787.4
37.5°	3080.2	3050.9	2851.8	2664.4	2576.6
40°	2887.0	2851.8	2635.1	2465.3	2371.6
42.5°	2705.4	2658.6	2447.8	2266.2	2160.8
45°	2512.2	2459.5	2248.7	2061.3	1979.3
47.5°	2318.9	2272.1	2078.8	1885.6	1791.9
50°	2114.0	2073.0	1897.3	1704.1	1604.5
52.5°	1944.2	1879.7	1709.9	1516.7	1434.7
55°	1745.1	1692.4	1534.2	1352.7	1282.4
57.5°	1563.5	1510.8	1364.4	1194.6	1136.0
60°	1393.7	1317.6	1194.6	1048.2	1001.4
62.5°	1206.3	1147.8	1042.3	919.4	977.9
65°	1036.5	977.9	884.2	901.8	749.6
67.5°	849.1	819.8	737.8	655.9	632.4
70°	691.0	655.9	626.6	538.7	515.3
72.5°	550.5	515.3	474.3	427.5	409.9
75°	415.8	386.5	363.1	345.5	380.6
77.5°	286.9	275.2	257.7	240.1	234.2
80°	187.4	181.5	175.7	169.8	164.0
82.5°	111.3	111.3	111.3	111.3	111.3
85°	58.6	64.4	70.3	76.1	82.0
87.5°	35.1	35.1	41.0	46.8	52.7
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)