

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: P546583

Luminaire Tested: **FMR-24-4-LD4-1STD-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: P546583
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-LD4-1STD-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

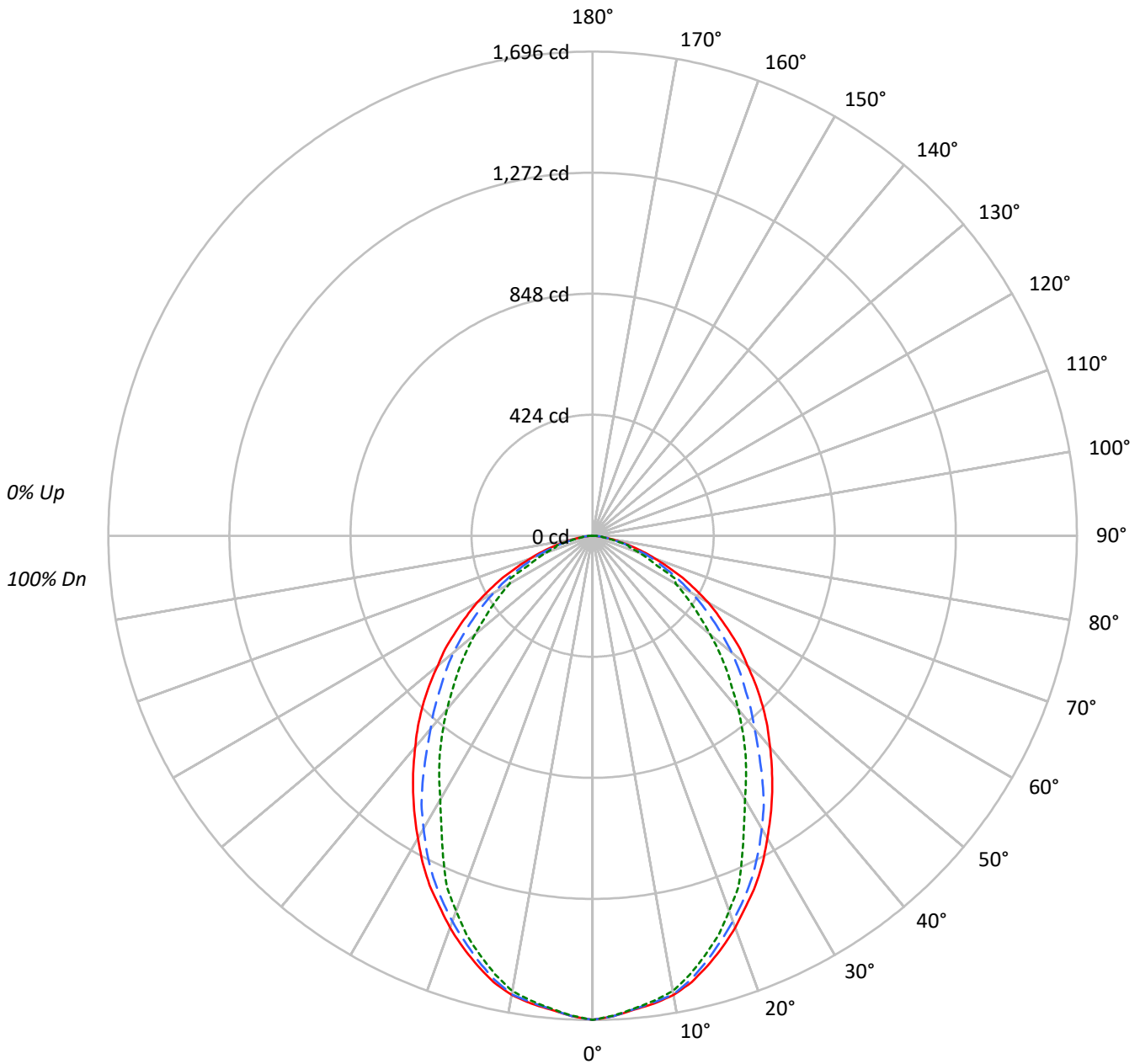
Lumens per Lamp: N/A
Luminaire Lumens: 3329.0 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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				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°	2282	2282	2282
5°	2251	2248	2245
10°	2231	2228	2212
15°	2171	2149	2119
20°	2091	2058	2001
25°	2005	1962	1839
30°	1901	1840	1657
35°	1800	1700	1533
40°	1698	1550	1395
45°	1600	1432	1261
50°	1481	1330	1124
55°	1370	1205	1007
60°	1256	1076	902
65°	1105	942	799
70°	910	825	679
75°	724	632	662
80°	486	456	425
85°	303	363	423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.9	4.7
10°-20°	433.2	13.0
20°-30°	599.8	18.0
30°-40°	639.5	19.2
40°-50°	583.4	17.5
50°-60°	457.1	13.7
60°-70°	297.9	8.9
70°-80°	132.0	4.0
80°-90°	28.3	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°	1190.8	35.8
0°-40°	1830.3	55.0
0°-60°	2870.8	86.2
0°-90°	3329.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3329.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1696	1696	1696	1696	1696	
5°	1666	1664	1664	1662	1662	158
15°	1558	1558	1543	1527	1521	438
25°	1351	1343	1321	1274	1239	620
35°	1096	1088	1035	957	933	685
45°	841	823	753	690	663	648
55°	584	567	514	453	429	524
65°	347	327	296	302	251	342
75°	139	129	122	116	127	149
85°	20	22	24	26	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1695.7	1695.7	1695.7	1695.7	1695.7
2.5°	1684.0	1684.0	1684.0	1682.0	1682.0
5°	1666.3	1664.4	1664.4	1662.4	1662.4
7.5°	1652.6	1650.7	1648.7	1646.7	1642.8
10°	1633.0	1633.0	1631.1	1621.3	1619.3
12.5°	1601.6	1599.7	1591.8	1578.1	1574.2
15°	1558.5	1558.5	1542.8	1527.2	1521.3
17.5°	1511.5	1509.5	1489.9	1474.2	1466.4
20°	1460.5	1456.6	1437.0	1411.5	1397.8
22.5°	1403.6	1403.6	1380.1	1346.8	1333.1
25°	1350.7	1342.9	1321.3	1274.3	1239.0
27.5°	1289.9	1278.2	1254.7	1188.0	1146.8
30°	1223.3	1217.4	1184.1	1097.8	1066.5
32.5°	1160.6	1150.8	1115.5	1025.3	999.8
35°	1095.9	1088.0	1035.1	956.7	933.2
37.5°	1031.2	1021.4	954.7	892.0	862.6
40°	966.5	954.7	882.2	825.3	794.0
42.5°	905.7	890.0	819.4	758.7	723.4
45°	841.0	823.4	752.8	690.1	662.6
47.5°	776.3	760.6	695.9	631.2	599.9
50°	707.7	694.0	635.2	570.5	537.2
52.5°	650.9	629.3	572.4	507.7	480.3
55°	584.2	566.6	513.6	452.9	429.3
57.5°	523.4	505.8	456.8	399.9	380.3
60°	466.6	441.1	399.9	350.9	335.2
62.5°	403.8	384.2	349.0	307.8	327.4
65°	347.0	327.4	296.0	301.9	250.9
67.5°	284.3	274.5	247.0	219.6	211.7
70°	231.3	219.6	209.8	180.4	172.5
72.5°	184.3	172.5	158.8	143.1	137.2
75°	139.2	129.4	121.5	115.7	127.4
77.5°	96.1	92.1	86.3	80.4	78.4
80°	62.7	60.8	58.8	56.9	54.9
82.5°	37.2	37.2	37.2	37.2	37.2
85°	19.6	21.6	23.5	25.5	27.4
87.5°	11.8	11.8	13.7	15.7	17.6
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)