

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: P545559

Luminaire Tested: **FMR-12-2-LD4-2HI-40-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: P545559
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-12-2-LD4-2HI-40-UNV-80-84-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

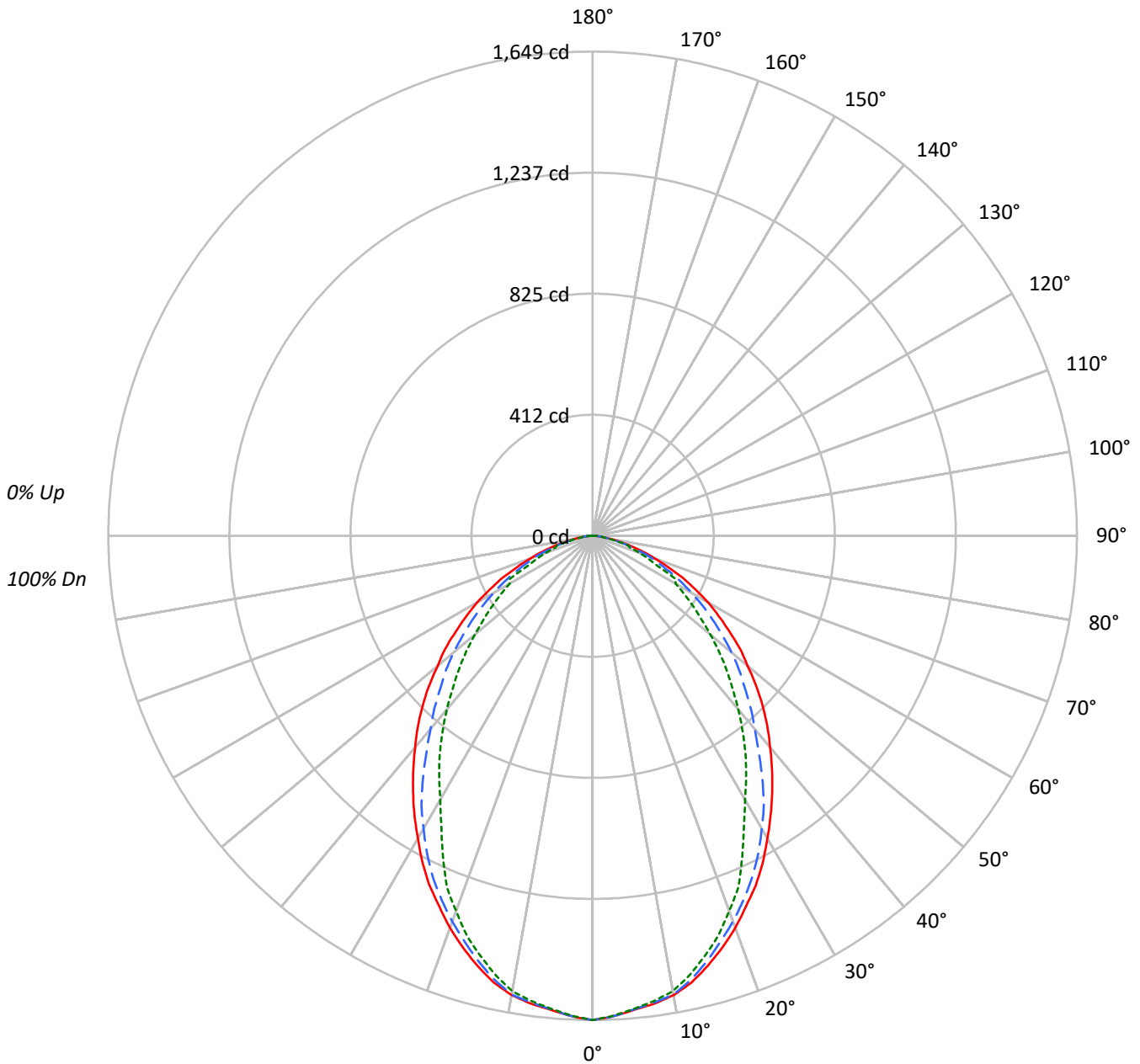
Lumens per Lamp: N/A
Luminaire Lumens: 3238.0 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	8877	8877	8877
5°	8756	8746	8736
10°	8681	8670	8607
15°	8446	8362	8245
20°	8136	8005	7787
25°	7802	7632	7156
30°	7395	7157	6446
35°	7003	6615	5963
40°	6605	6029	5426
45°	6226	5573	4905
50°	5764	5173	4375
55°	5332	4688	3918
60°	4885	4187	3510
65°	4298	3666	3109
70°	3541	3210	2640
75°	2816	2458	2576
80°	1891	1773	1655
85°	1179	1414	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.5	4.7
10°-20°	421.4	13.0
20°-30°	583.4	18.0
30°-40°	622.0	19.2
40°-50°	567.5	17.5
50°-60°	444.6	13.7
60°-70°	289.7	8.9
70°-80°	128.4	4.0
80°-90°	27.6	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°	1158.3	35.8
0°-40°	1780.3	55.0
0°-60°	2792.3	86.2
0°-90°	3238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3238.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1649	1649	1649	1649	1649	
5°	1621	1619	1619	1617	1617	154
15°	1516	1516	1501	1485	1480	426
25°	1314	1306	1285	1239	1205	603
35°	1066	1058	1007	930	908	666
45°	818	801	732	671	644	630
55°	568	551	500	440	418	510
65°	338	318	288	294	244	333
75°	135	126	118	112	124	145
85°	19	21	23	25	27	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1649.4	1649.4	1649.4	1649.4	1649.4
2.5°	1638.0	1638.0	1638.0	1636.0	1636.0
5°	1620.8	1618.9	1618.9	1617.0	1617.0
7.5°	1607.4	1605.5	1603.6	1601.7	1597.9
10°	1588.4	1588.4	1586.5	1576.9	1575.0
12.5°	1557.9	1556.0	1548.3	1535.0	1531.2
15°	1515.9	1515.9	1500.7	1485.4	1479.7
17.5°	1470.2	1468.2	1449.2	1433.9	1426.3
20°	1420.6	1416.8	1397.7	1372.9	1359.6
22.5°	1365.3	1365.3	1342.4	1310.0	1296.6
25°	1313.8	1306.2	1285.2	1239.4	1205.1
27.5°	1254.7	1243.2	1220.4	1155.5	1115.5
30°	1189.9	1184.1	1151.7	1067.8	1037.3
32.5°	1128.8	1119.3	1085.0	997.3	972.5
35°	1065.9	1058.3	1006.8	930.5	907.6
37.5°	1003.0	993.4	928.6	867.6	839.0
40°	940.1	928.6	858.1	802.8	772.3
42.5°	880.9	865.7	797.0	737.9	703.6
45°	818.0	800.9	732.2	671.2	644.5
47.5°	755.1	739.8	676.9	614.0	583.5
50°	688.4	675.0	617.8	554.9	522.5
52.5°	633.1	612.1	556.8	493.9	467.2
55°	568.2	551.1	499.6	440.5	417.6
57.5°	509.1	492.0	444.3	389.0	369.9
60°	453.8	429.0	389.0	341.3	326.1
62.5°	392.8	373.7	339.4	299.4	318.4
65°	337.5	318.4	287.9	293.6	244.1
67.5°	276.5	267.0	240.3	213.6	205.9
70°	225.0	213.6	204.0	175.4	167.8
72.5°	179.2	167.8	154.5	139.2	133.5
75°	135.4	125.8	118.2	112.5	123.9
77.5°	93.4	89.6	83.9	78.2	76.3
80°	61.0	59.1	57.2	55.3	53.4
82.5°	36.2	36.2	36.2	36.2	36.2
85°	19.1	21.0	22.9	24.8	26.7
87.5°	11.4	11.4	13.3	15.3	17.2
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)