

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: P545588

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-93-94-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: P545588
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-93-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

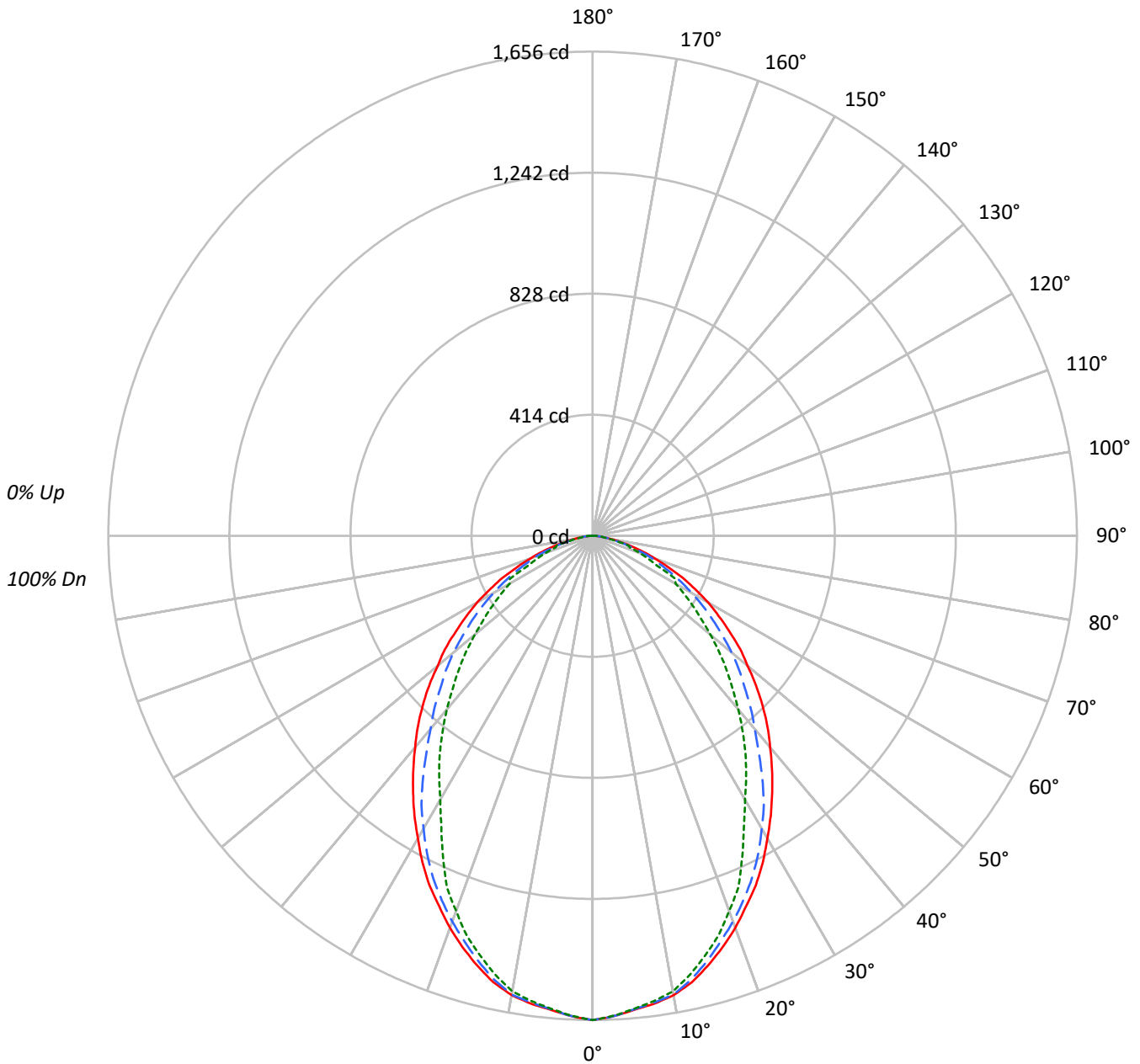
Lumens per Lamp: N/A
Luminaire Lumens: 3252.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	8915	8915	8915
5°	8794	8784	8774
10°	8718	8707	8645
15°	8483	8398	8280
20°	8171	8039	7820
25°	7836	7665	7187
30°	7426	7188	6474
35°	7033	6644	5989
40°	6633	6055	5449
45°	6253	5597	4927
50°	5788	5195	4393
55°	5355	4708	3935
60°	4906	4205	3525
65°	4317	3683	3121
70°	3556	3224	2651
75°	2828	2468	2589
80°	1900	1782	1661
85°	1186	1420	1655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	4.7
10°-20°	423.2	13.0
20°-30°	585.9	18.0
30°-40°	624.7	19.2
40°-50°	569.9	17.5
50°-60°	446.5	13.7
60°-70°	291.0	8.9
70°-80°	128.9	4.0
80°-90°	27.7	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°	1163.3	35.8
0°-40°	1788.0	55.0
0°-60°	2804.4	86.2
0°-90°	3252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1628	1626	1626	1624	1624	155
15°	1522	1522	1507	1492	1486	428
25°	1320	1312	1291	1245	1210	606
35°	1070	1063	1011	934	912	669
45°	822	804	735	674	647	633
55°	571	554	502	442	419	512
65°	339	320	289	295	245	334
75°	136	126	119	113	124	146
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1656.5	1656.5	1656.5	1656.5	1656.5
2.5°	1645.0	1645.0	1645.0	1643.1	1643.1
5°	1627.8	1625.9	1625.9	1624.0	1624.0
7.5°	1614.4	1612.5	1610.6	1608.6	1604.8
10°	1595.2	1595.2	1593.3	1583.8	1581.8
12.5°	1564.6	1562.7	1555.0	1541.6	1537.8
15°	1522.5	1522.5	1507.2	1491.8	1486.1
17.5°	1476.5	1474.6	1455.4	1440.1	1432.5
20°	1426.7	1422.9	1403.7	1378.8	1365.4
22.5°	1371.2	1371.2	1348.2	1315.6	1302.2
25°	1319.5	1311.8	1290.7	1244.8	1210.3
27.5°	1260.1	1248.6	1225.6	1160.5	1120.3
30°	1195.0	1189.3	1156.7	1072.4	1041.8
32.5°	1133.7	1124.1	1089.7	1001.6	976.7
35°	1070.5	1062.9	1011.2	934.5	911.6
37.5°	1007.3	997.7	932.6	871.4	842.6
40°	944.1	932.6	861.8	806.2	775.6
42.5°	884.8	869.4	800.5	741.1	706.7
45°	821.6	804.3	735.4	674.1	647.3
47.5°	758.4	743.0	679.8	616.6	586.0
50°	691.3	677.9	620.5	557.3	524.7
52.5°	635.8	614.7	559.2	496.0	469.2
55°	570.7	553.5	501.7	442.4	419.4
57.5°	511.3	494.1	446.2	390.7	371.5
60°	455.8	430.9	390.7	342.8	327.5
62.5°	394.5	375.4	340.9	300.7	319.8
65°	339.0	319.8	289.2	294.9	245.1
67.5°	277.7	268.1	241.3	214.5	206.8
70°	226.0	214.5	204.9	176.2	168.5
72.5°	180.0	168.5	155.1	139.8	134.1
75°	136.0	126.4	118.7	113.0	124.5
77.5°	93.8	90.0	84.3	78.5	76.6
80°	61.3	59.4	57.5	55.5	53.6
82.5°	36.4	36.4	36.4	36.4	36.4
85°	19.2	21.1	23.0	24.9	26.8
87.5°	11.5	11.5	13.4	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)