

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: P589106

Luminaire Tested: **FMR-24-2-LD4-2LO-35-UNV-93-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-2LO-35-UNV-93-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Summary

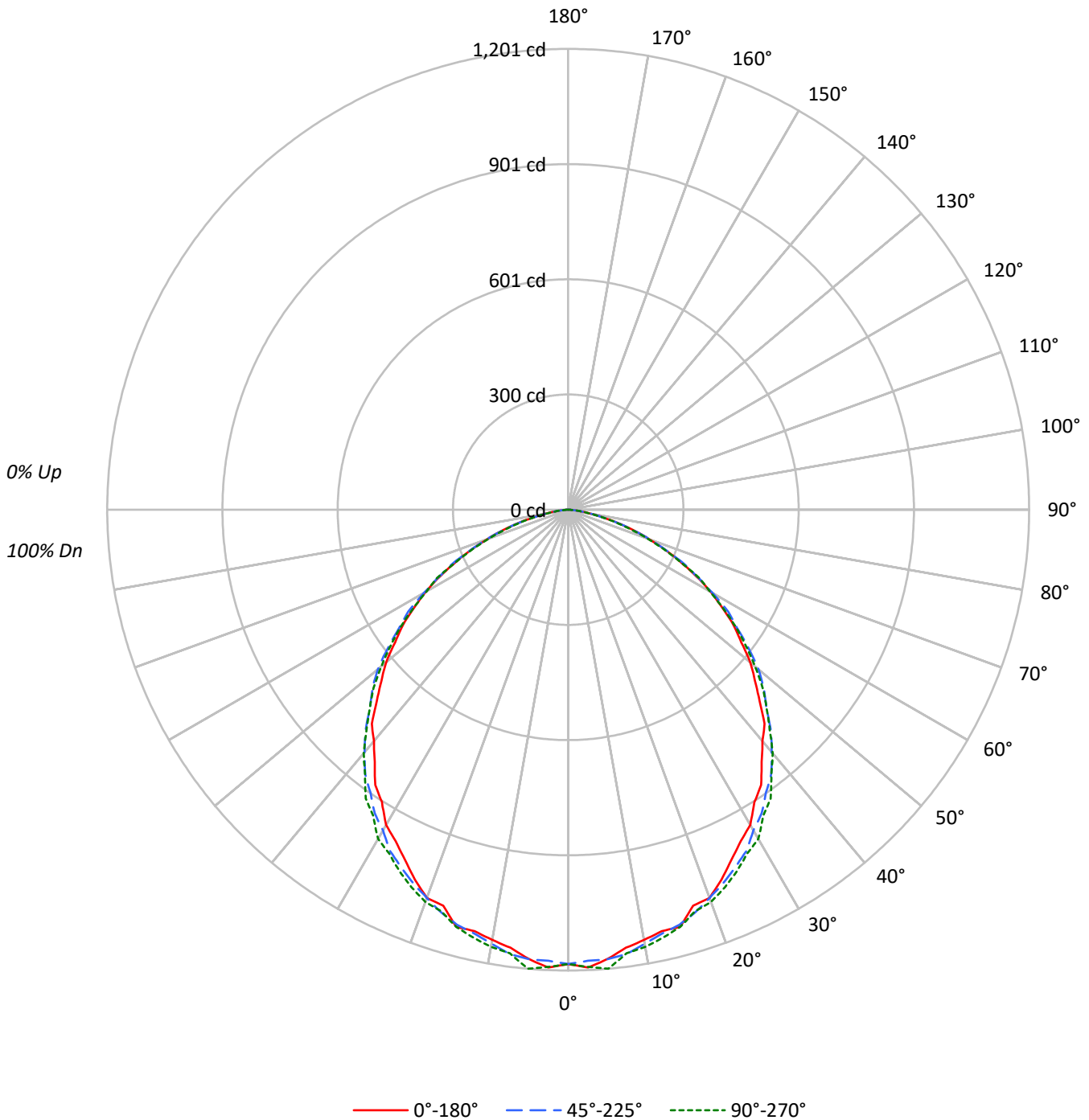
Lumens per Lamp: N/A
Luminaire Lumens: 2984.0 lumens
Efficiency: N/A
Efficacy: 127.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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				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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3186	3186	3186
5°	3176	3177	3244
10°	3111	3138	3160
15°	3136	3119	3136
20°	3083	3083	3116
25°	2988	3053	3087
30°	2947	2999	3078
35°	2877	2953	3019
40°	2766	2899	2912
45°	2682	2777	2782
50°	2594	2711	2659
55°	2472	2519	2502
60°	2311	2334	2292
65°	2060	2113	2046
70°	1768	1774	1725
75°	1400	1397	1343
80°	938	913	877
85°	509	506	472



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.4	3.7
10°-20°	315.6	10.6
20°-30°	472.9	15.8
30°-40°	560.5	18.8
40°-50°	561.5	18.8
50°-60°	476.6	16.0
60°-70°	321.3	10.8
70°-80°	141.2	4.7
80°-90°	23.0	0.8
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°	899.9	30.2
0°-40°	1460.4	48.9
0°-60°	2498.5	83.7
0°-90°	2984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1176	1173	1176	1172	1201	111
15°	1126	1113	1120	1125	1126	314
25°	1006	1012	1028	1042	1040	465
35°	876	878	899	920	919	544
45°	705	718	730	749	731	545
55°	527	523	537	533	533	469
65°	324	319	332	319	321	322
75°	135	132	134	125	129	144
85°	16	16	16	16	15	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1184.0	1184.0	1184.0	1184.0	<i>1184.0</i>
2.5°	1194.2	1185.2	1176.8	1186.6	<i>1192.5</i>
5°	<i>1175.6</i>	<i>1172.8</i>	<i>1176.0</i>	<i>1172.5</i>	<i>1200.8</i>
7.5°	1151.4	1162.0	1168.1	1164.3	<i>1165.9</i>
10°	1138.6	1134.9	1148.5	1158.0	<i>1156.6</i>
12.5°	1124.8	1130.3	1131.1	1141.3	<i>1142.2</i>
15°	1125.6	1112.6	1119.5	1125.3	<i>1125.7</i>
17.5°	1081.9	1095.9	1100.7	1114.0	<i>1097.5</i>
20°	1076.5	1066.3	1076.5	1090.1	<i>1088.0</i>
22.5°	1043.6	1032.2	1054.2	1066.3	<i>1065.5</i>
25°	1006.3	1011.8	1028.4	1041.8	<i>1039.7</i>
27.5°	973.6	980.0	1003.6	1022.1	<i>1010.2</i>
30°	948.4	945.2	965.1	981.6	<i>990.7</i>
32.5°	903.3	914.9	938.2	954.5	<i>945.8</i>
35°	875.9	878.5	898.9	919.7	<i>919.1</i>
37.5°	828.1	840.2	868.8	874.6	<i>869.2</i>
40°	787.3	799.4	825.2	831.5	<i>828.9</i>
42.5°	757.2	759.3	781.5	788.7	<i>777.2</i>
45°	704.7	717.9	729.8	748.6	<i>730.9</i>
47.5°	660.1	666.2	691.9	696.9	<i>687.6</i>
50°	619.6	621.7	647.6	641.3	<i>635.2</i>
52.5°	568.7	577.7	592.2	591.0	<i>583.8</i>
55°	526.8	523.3	537.0	533.4	<i>533.2</i>
57.5°	476.5	482.6	493.9	488.1	<i>478.8</i>
60°	429.4	429.6	433.7	427.1	<i>425.9</i>
62.5°	377.0	378.8	379.7	371.6	<i>384.8</i>
65°	323.6	319.3	331.9	319.2	<i>321.3</i>
67.5°	274.6	276.7	275.5	267.5	<i>270.6</i>
70°	224.7	227.5	225.5	216.5	<i>219.2</i>
72.5°	179.2	175.8	177.9	166.6	<i>171.8</i>
75°	134.7	131.9	134.4	124.9	<i>129.2</i>
77.5°	91.7	93.9	92.3	87.3	<i>90.2</i>
80°	60.5	58.9	58.9	56.0	<i>56.6</i>
82.5°	35.3	33.6	33.2	32.3	<i>33.6</i>
85°	16.5	16.1	16.4	15.9	<i>15.3</i>
87.5°	6.0	6.1	6.1	5.8	<i>5.5</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)