

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: P589109

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-80-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589109
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-40-UNV-80-84-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

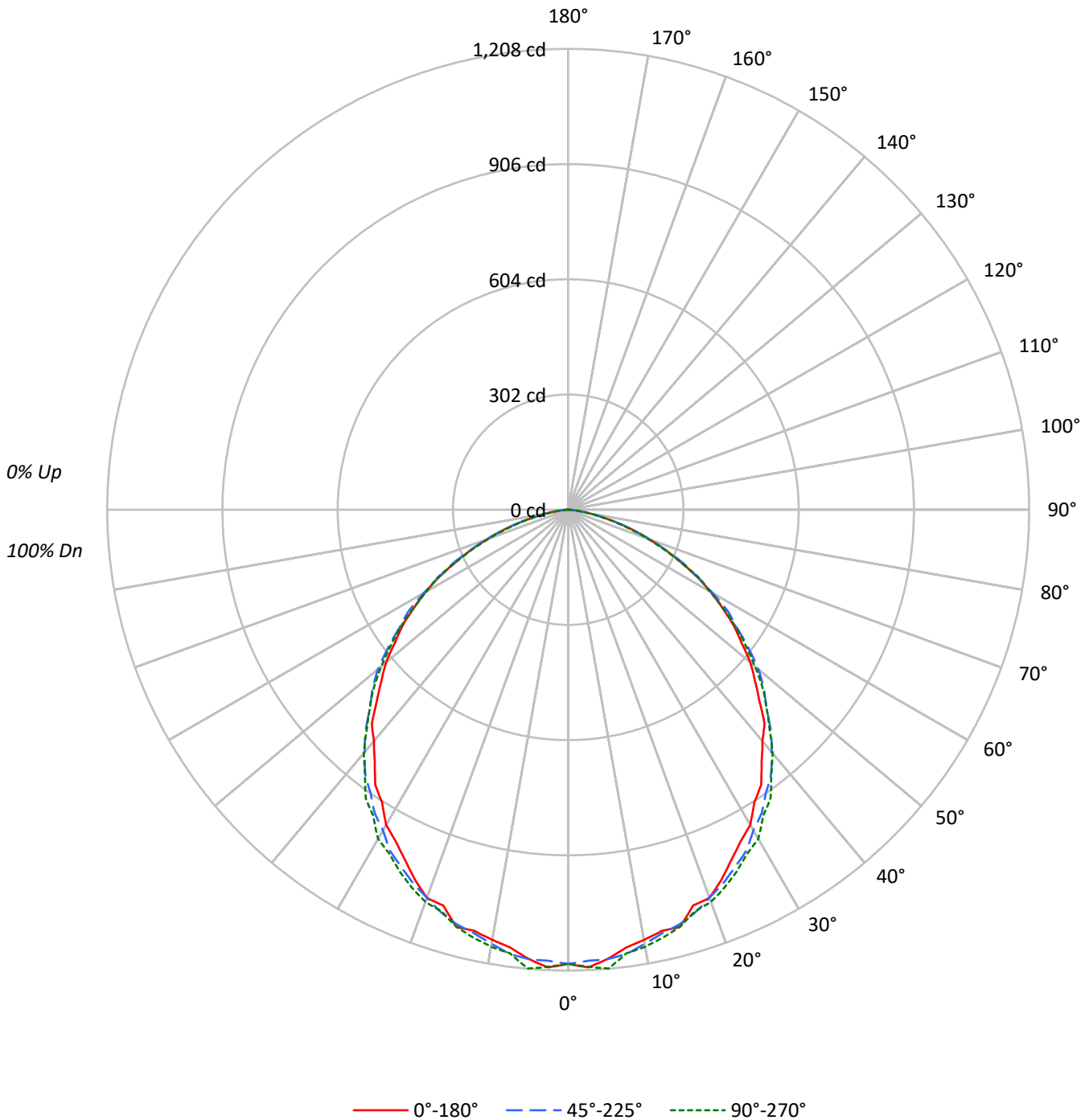
Lumens per Lamp: N/A
Luminaire Lumens: 3001.0 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (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	
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°	3204	3204	3204
5°	3194	3195	3262
10°	3129	3156	3178
15°	3154	3136	3154
20°	3100	3100	3133
25°	3005	3071	3105
30°	2964	3016	3096
35°	2894	2970	3036
40°	2781	2915	2928
45°	2697	2793	2797
50°	2609	2726	2674
55°	2486	2534	2516
60°	2324	2348	2305
65°	2073	2125	2058
70°	1778	1784	1735
75°	1408	1405	1351
80°	944	917	882
85°	513	509	475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.7
10°-20°	317.4	10.6
20°-30°	475.6	15.8
30°-40°	563.7	18.8
40°-50°	564.7	18.8
50°-60°	479.3	16.0
60°-70°	323.2	10.8
70°-80°	142.0	4.7
80°-90°	23.1	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°	905.0	30.2
0°-40°	1468.7	48.9
0°-60°	2512.7	83.7
0°-90°	3001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1191	1191	1191	1191	1191	
5°	1182	1180	1183	1179	1208	111
15°	1132	1119	1126	1132	1132	315
25°	1012	1018	1034	1048	1046	468
35°	881	884	904	925	924	547
45°	709	722	734	753	735	548
55°	530	526	540	536	536	471
65°	326	321	334	321	323	324
75°	135	133	135	126	130	145
85°	17	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°	1190.7	1190.7	1190.7	1190.7	1190.7
2.5°	1201.0	1192.0	1183.5	1193.3	1199.3
5°	1182.3	1179.5	1182.7	1179.2	1207.6
7.5°	1158.0	1168.6	1174.7	1170.9	1172.6
10°	1145.1	1141.4	1155.1	1164.6	1163.2
12.5°	1131.2	1136.8	1137.5	1147.8	1148.7
15°	1132.0	1118.9	1125.8	1131.7	1132.1
17.5°	1088.0	1102.2	1106.9	1120.3	1103.7
20°	1082.6	1072.3	1082.6	1096.3	1094.2
22.5°	1049.6	1038.1	1060.2	1072.3	1071.6
25°	1012.1	1017.6	1034.2	1047.7	1045.6
27.5°	979.2	985.6	1009.3	1027.9	1015.9
30°	953.8	950.6	970.6	987.2	996.4
32.5°	908.5	920.1	943.5	960.0	951.2
35°	880.9	883.5	904.0	924.9	924.3
37.5°	832.8	845.0	873.7	879.6	874.2
40°	791.8	803.9	829.9	836.2	833.6
42.5°	761.5	763.6	785.9	793.1	781.6
45°	708.7	722.0	734.0	752.9	735.0
47.5°	663.9	670.0	695.8	700.9	691.5
50°	623.1	625.3	651.2	644.9	638.8
52.5°	571.9	581.0	595.6	594.4	587.1
55°	529.8	526.3	540.1	536.4	536.2
57.5°	479.2	485.4	496.7	490.9	481.5
60°	431.9	432.0	436.2	429.6	428.3
62.5°	379.1	381.0	381.9	373.7	387.0
65°	325.5	321.2	333.8	321.0	323.2
67.5°	276.1	278.3	277.0	269.0	272.1
70°	226.0	228.8	226.8	217.7	220.5
72.5°	180.2	176.8	179.0	167.6	172.8
75°	135.4	132.7	135.1	125.6	129.9
77.5°	92.2	94.4	92.9	87.8	90.7
80°	60.9	59.2	59.2	56.3	56.9
82.5°	35.5	33.8	33.4	32.4	33.8
85°	16.6	16.1	16.5	16.0	15.4
87.5°	6.0	6.1	6.1	5.8	5.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)