

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: P589209

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-80-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589209
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-LD4-2STD-40-UNV-80-88-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

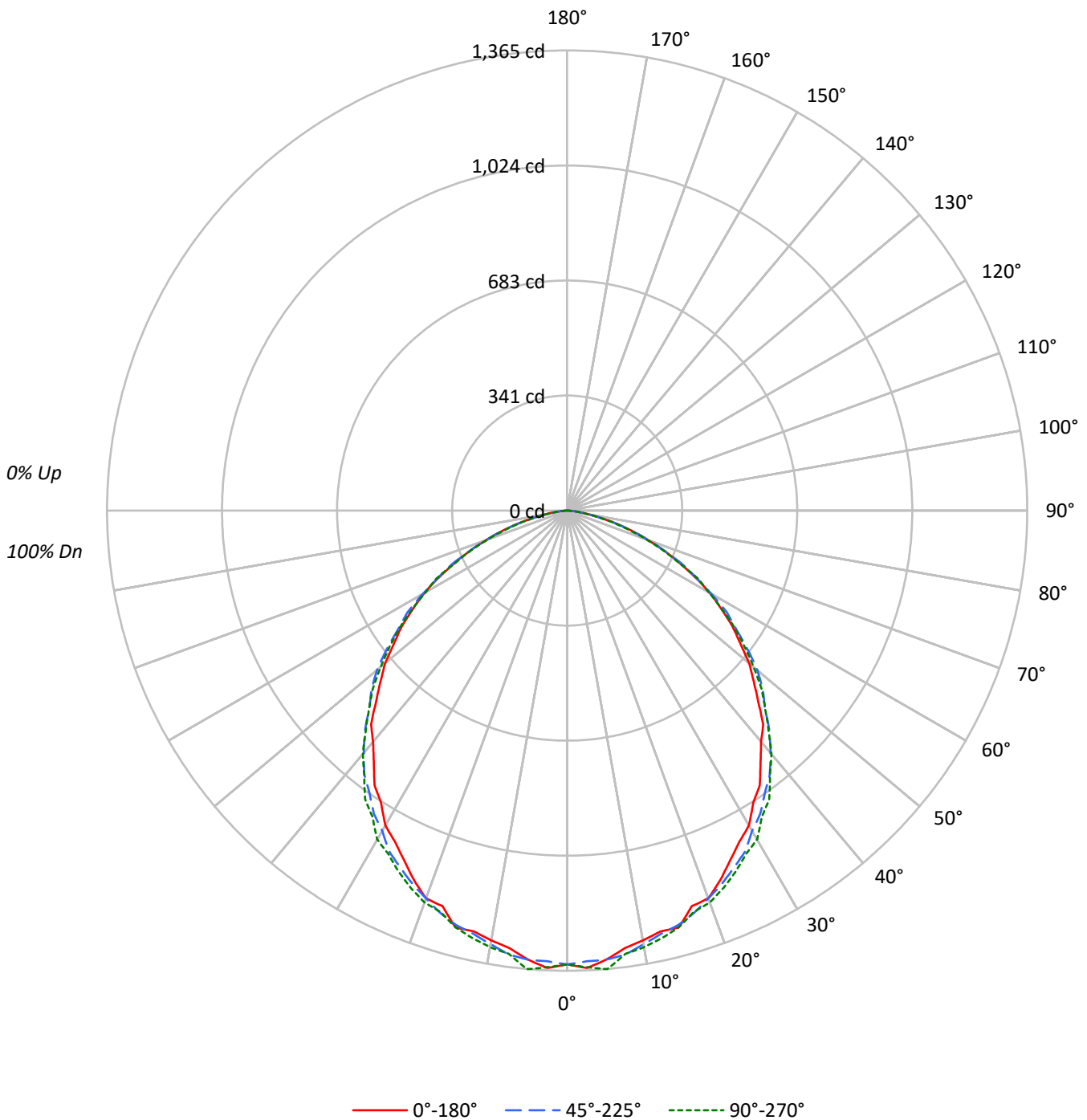
Lumens per Lamp: N/A
Luminaire Lumens: 3393.0 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	
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°	3623	3623	3623
5°	3611	3612	3688
10°	3537	3568	3593
15°	3566	3546	3566
20°	3505	3505	3543
25°	3398	3472	3510
30°	3351	3410	3500
35°	3272	3358	3433
40°	3145	3296	3311
45°	3049	3158	3162
50°	2949	3082	3023
55°	2810	2865	2845
60°	2628	2654	2606
65°	2343	2403	2327
70°	2010	2017	1961
75°	1592	1589	1527
80°	1066	1037	996
85°	580	574	537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.6	3.7
10°-20°	358.9	10.6
20°-30°	537.7	15.8
30°-40°	637.3	18.8
40°-50°	638.5	18.8
50°-60°	542.0	16.0
60°-70°	365.4	10.8
70°-80°	160.6	4.7
80°-90°	26.1	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°	1023.2	30.2
0°-40°	1660.5	48.9
0°-60°	2841.0	83.7
0°-90°	3393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1346	1346	1346	1346	1346	
5°	1337	1334	1337	1333	1365	126
15°	1280	1265	1273	1280	1280	357
25°	1144	1150	1169	1185	1182	529
35°	996	999	1022	1046	1045	618
45°	801	816	830	851	831	620
55°	599	595	611	606	606	533
65°	368	363	377	363	365	366
75°	153	150	153	142	147	164
85°	19	18	19	18	17	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1346.3	1346.3	1346.3	1346.3	1346.3
2.5°	1357.9	1347.6	1338.1	1349.2	1356.0
5°	1336.7	1333.6	1337.2	1333.2	1365.4
7.5°	1309.2	1321.2	1328.2	1323.8	1325.7
10°	1294.6	1290.5	1305.9	1316.7	1315.1
12.5°	1279.0	1285.2	1286.1	1297.8	1298.8
15°	1279.9	1265.1	1272.9	1279.5	1280.0
17.5°	1230.1	1246.1	1251.5	1266.6	1247.9
20°	1224.1	1212.4	1224.1	1239.5	1237.1
22.5°	1186.7	1173.7	1198.7	1212.4	1211.5
25°	1144.3	1150.5	1169.3	1184.6	1182.2
27.5°	1107.1	1114.4	1141.1	1162.2	1148.6
30°	1078.4	1074.7	1097.3	1116.1	1126.5
32.5°	1027.1	1040.3	1066.7	1085.3	1075.4
35°	996.0	999.0	1022.1	1045.7	1045.0
37.5°	941.6	955.3	987.8	994.4	988.4
40°	895.2	908.9	938.3	945.4	942.5
42.5°	860.9	863.4	888.6	896.8	883.7
45°	801.3	816.3	829.8	851.2	831.0
47.5°	750.6	757.5	786.7	792.5	781.9
50°	704.5	706.9	736.3	729.2	722.2
52.5°	646.6	656.9	673.4	672.0	663.8
55°	599.0	595.0	610.6	606.5	606.3
57.5°	541.8	548.8	561.6	555.0	544.4
60°	488.3	488.4	493.1	485.7	484.3
62.5°	428.6	430.7	431.8	422.6	437.5
65°	368.0	363.1	377.4	362.9	365.4
67.5°	312.2	314.6	313.2	304.2	307.7
70°	255.5	258.6	256.4	246.1	249.3
72.5°	203.7	199.9	202.3	189.5	195.4
75°	153.1	150.0	152.8	142.0	146.9
77.5°	104.3	106.7	105.0	99.3	102.6
80°	68.8	66.9	66.9	63.6	64.3
82.5°	40.2	38.2	37.7	36.7	38.2
85°	18.8	18.3	18.6	18.1	17.4
87.5°	6.8	7.0	7.0	6.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)