

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P590231

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590231
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
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2LO-35-UNV-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

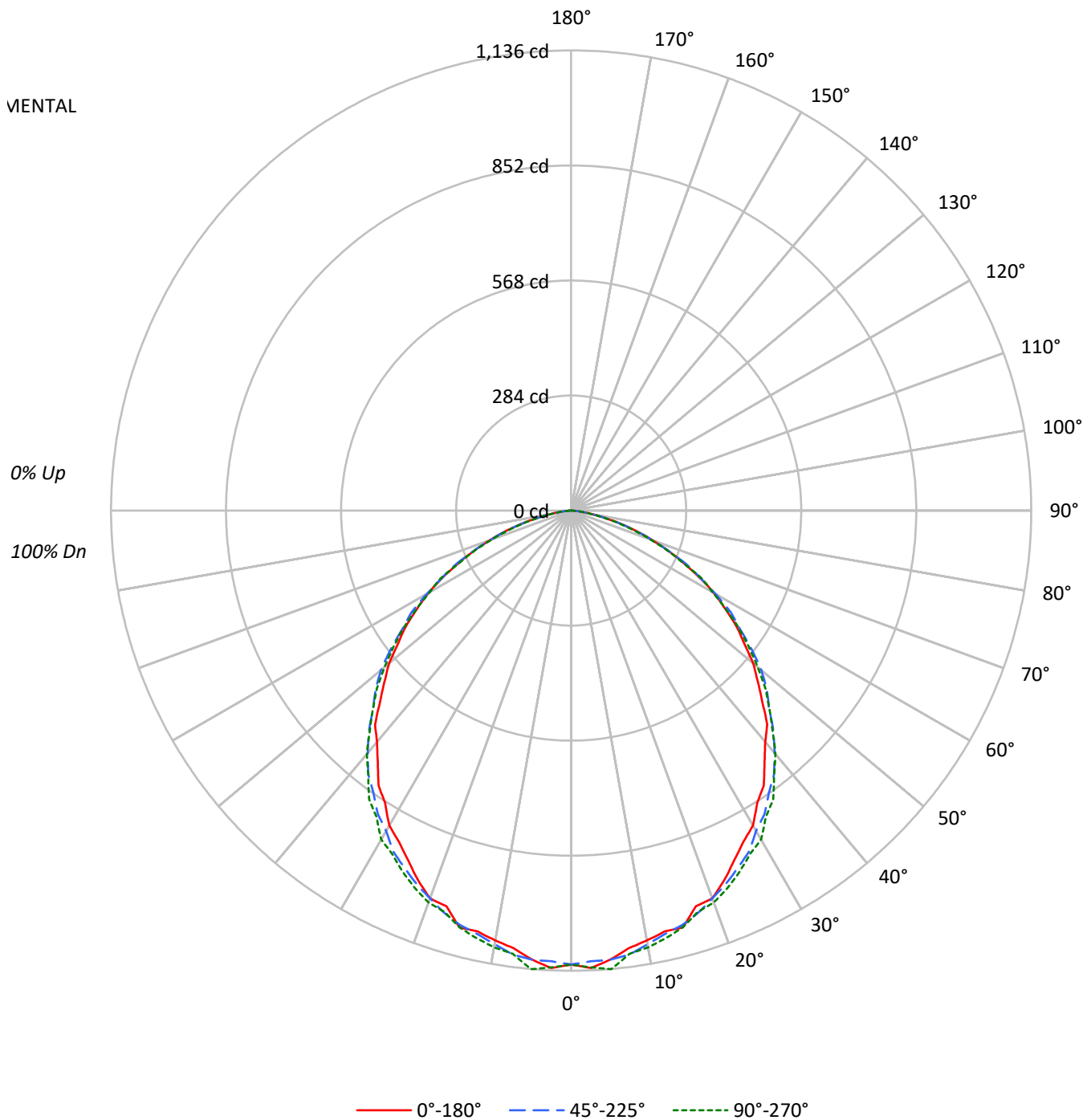
Lumens per Lamp: N/A
Luminaire Lumens: 2824.0 lumens
Efficiency: N/A
Efficacy: 120.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V):
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: 24 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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3015	3015	3015
5°	3005	3007	3070
10°	2944	2970	2991
15°	2968	2951	2968
20°	2918	2918	2948
25°	2828	2890	2921
30°	2789	2838	2913
35°	2723	2795	2857
40°	2617	2743	2755
45°	2538	2629	2632
50°	2455	2565	2516
55°	2339	2384	2367
60°	2187	2209	2169
65°	1950	2000	1936
70°	1674	1679	1633
75°	1326	1323	1271
80°	888	863	829
85°	482	479	448

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2696 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.4	3.7
10°-20°	298.7	10.6
20°-30°	447.5	15.8
30°-40°	530.4	18.8
40°-50°	531.4	18.8
50°-60°	451.1	16.0
60°-70°	304.1	10.8
70°-80°	133.6	4.7
80°-90°	21.7	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°	851.6	30.2
0°-40°	1382.1	48.9
0°-60°	2364.5	83.7
0°-90°	2824.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2824.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1112	1110	1113	1110	1136	105
15°	1065	1053	1059	1065	1065	297
25°	952	958	973	986	984	440
35°	829	831	851	870	870	515
45°	667	679	691	708	692	516
55°	498	495	508	505	505	443
65°	306	302	314	302	304	305
75°	128	125	127	118	122	137
85°	16	15	16	15	14	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1120.5	1120.5	1120.5	1120.5	1120.5
2.5°	1130.2	1121.6	1113.7	1123.0	1128.6
5°	1112.5	1109.9	1113.0	1109.6	1136.4
7.5°	1089.7	1099.7	1105.4	1101.8	1103.4
10°	1077.5	1074.1	1086.9	1095.9	1094.6
12.5°	1064.5	1069.7	1070.4	1080.1	1081.0
15°	1065.2	1052.9	1059.4	1064.9	1065.4
17.5°	1023.9	1037.2	1041.6	1054.2	1038.6
20°	1018.8	1009.1	1018.8	1031.7	1029.6
22.5°	987.7	976.8	997.7	1009.1	1008.4
25°	952.4	957.6	973.2	985.9	983.9
27.5°	921.4	927.5	949.8	967.3	956.0
30°	897.6	894.5	913.3	928.9	937.6
32.5°	854.9	865.9	887.9	903.3	895.1
35°	829.0	831.4	850.7	870.4	869.8
37.5°	783.7	795.1	822.2	827.7	822.6
40°	745.1	756.5	780.9	786.9	784.4
42.5°	716.6	718.6	739.6	746.4	735.5
45°	666.9	679.4	690.7	708.5	691.7
47.5°	624.7	630.5	654.8	659.6	650.7
50°	586.4	588.4	612.8	606.9	601.1
52.5°	538.2	546.7	560.5	559.3	552.5
55°	498.5	495.2	508.2	504.8	504.6
57.5°	450.9	456.7	467.4	461.9	453.1
60°	406.4	406.5	410.4	404.2	403.1
62.5°	356.8	358.5	359.4	351.7	364.1
65°	306.3	302.2	314.1	302.1	304.1
67.5°	259.8	261.9	260.7	253.2	256.1
70°	212.7	215.3	213.4	204.9	207.5
72.5°	169.6	166.4	168.4	157.7	162.6
75°	127.5	124.9	127.2	118.2	122.2
77.5°	86.8	88.8	87.4	82.6	85.4
80°	57.3	55.7	55.7	53.0	53.5
82.5°	33.4	31.8	31.4	30.5	31.8
85°	15.6	15.2	15.5	15.0	14.5
87.5°	5.6	5.8	5.8	5.5	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)