

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: P590230

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590230
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-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2856.0 lumens
Efficiency: N/A
Efficacy: 122.1 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

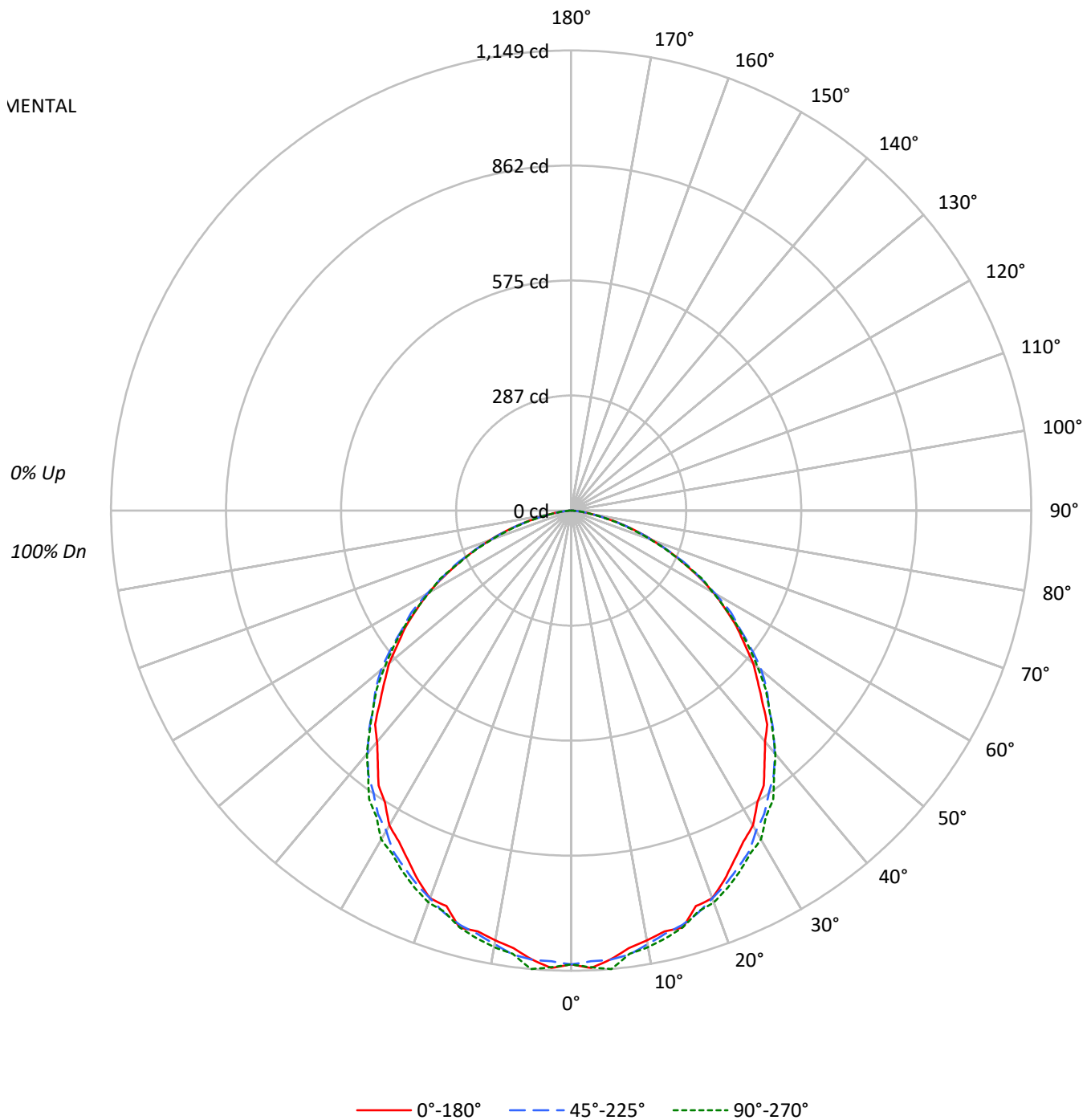
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3049	3049	3049
5°	3039	3041	3105
10°	2978	3004	3025
15°	3001	2985	3002
20°	2950	2950	2982
25°	2860	2922	2955
30°	2820	2870	2946
35°	2754	2826	2890
40°	2647	2774	2787
45°	2567	2658	2662
50°	2483	2595	2545
55°	2365	2411	2394
60°	2212	2234	2194
65°	1972	2022	1958
70°	1692	1698	1651
75°	1340	1337	1285
80°	897	872	838
85°	488	485	451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2727 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	3.7
10°-20°	302.1	10.6
20°-30°	452.6	15.8
30°-40°	536.4	18.8
40°-50°	537.4	18.8
50°-60°	456.2	16.0
60°-70°	307.6	10.8
70°-80°	135.1	4.7
80°-90°	22.0	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°	861.3	30.2
0°-40°	1397.7	48.9
0°-60°	2391.3	83.7
0°-90°	2856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1125	1122	1126	1122	1149	106
15°	1077	1065	1071	1077	1077	300
25°	963	968	984	997	995	445
35°	838	841	860	880	880	521
45°	674	687	698	716	700	522
55°	504	501	514	510	510	449
65°	310	306	318	306	308	308
75°	129	126	129	120	124	138
85°	16	15	16	15	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1133.2	1133.2	1133.2	1133.2	1133.2
2.5°	1143.0	1134.4	1126.3	1135.7	1141.4
5°	1125.1	1122.5	1125.6	1122.2	1149.3
7.5°	1102.0	1112.1	1118.0	1114.3	1115.9
10°	1089.7	1086.2	1099.2	1108.3	1107.0
12.5°	1076.6	1081.8	1082.6	1092.4	1093.2
15°	1077.3	1064.9	1071.4	1077.0	1077.4
17.5°	1035.5	1048.9	1053.4	1066.2	1050.4
20°	1030.3	1020.5	1030.3	1043.4	1041.3
22.5°	998.9	987.9	1009.0	1020.5	1019.8
25°	963.2	968.4	984.2	997.1	995.1
27.5°	931.9	938.0	960.5	978.2	966.8
30°	907.7	904.6	923.7	939.5	948.2
32.5°	864.6	875.7	897.9	913.6	905.2
35°	838.4	840.9	860.3	880.2	879.6
37.5°	792.6	804.1	831.5	837.1	831.9
40°	753.5	765.1	789.8	795.8	793.3
42.5°	724.7	726.7	747.9	754.8	743.9
45°	674.5	687.1	698.5	716.5	699.5
47.5°	631.8	637.6	662.2	667.0	658.1
50°	593.0	595.1	619.8	613.8	607.9
52.5°	544.3	552.9	566.8	565.6	558.8
55°	504.2	500.8	514.0	510.5	510.3
57.5°	456.1	461.9	472.7	467.2	458.3
60°	411.0	411.1	415.1	408.8	407.6
62.5°	360.8	362.6	363.4	355.7	368.3
65°	309.7	305.6	317.6	305.5	307.5
67.5°	262.8	264.8	263.7	256.0	259.0
70°	215.1	217.7	215.8	207.2	209.8
72.5°	171.5	168.3	170.3	159.5	164.5
75°	128.9	126.3	128.6	119.5	123.6
77.5°	87.8	89.8	88.4	83.5	86.3
80°	57.9	56.3	56.3	53.6	54.1
82.5°	33.8	32.2	31.7	30.9	32.2
85°	15.8	15.4	15.7	15.2	14.6
87.5°	5.7	5.9	5.9	5.6	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)