

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: P590232

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590232
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-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2732.0 lumens
Efficiency: N/A
Efficacy: 116.8 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

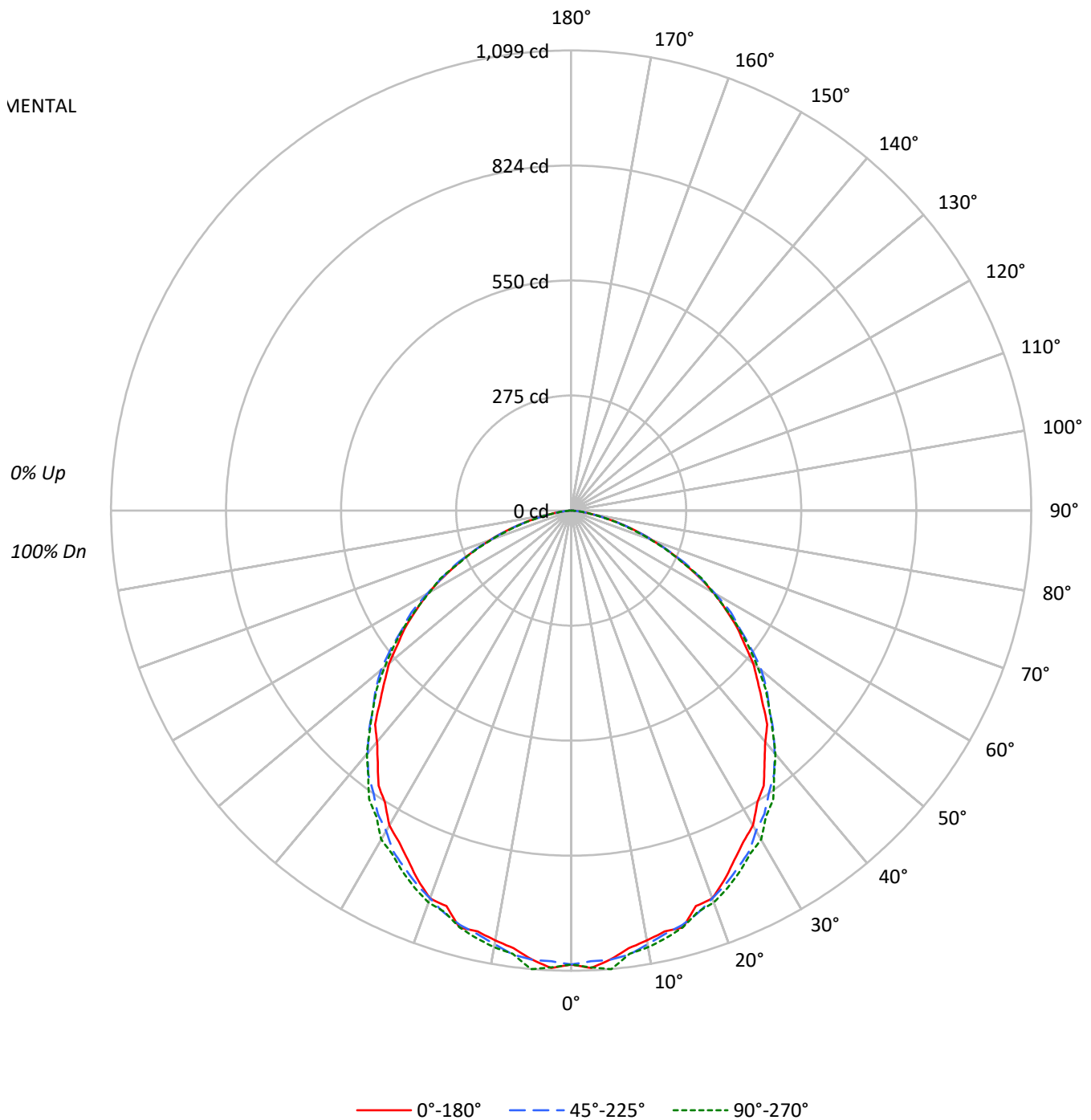
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2917	2917	2917
5°	2907	2908	2970
10°	2848	2873	2893
15°	2871	2855	2871
20°	2822	2822	2853
25°	2736	2795	2826
30°	2698	2746	2819
35°	2635	2704	2764
40°	2532	2654	2666
45°	2455	2543	2546
50°	2375	2482	2434
55°	2263	2307	2290
60°	2116	2137	2098
65°	1887	1935	1873
70°	1618	1624	1579
75°	1282	1279	1230
80°	859	835	803
85°	466	463	432

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2608 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	3.7
10°-20°	289.0	10.6
20°-30°	433.0	15.8
30°-40°	513.1	18.8
40°-50°	514.1	18.8
50°-60°	436.4	16.0
60°-70°	294.2	10.8
70°-80°	129.3	4.7
80°-90°	21.0	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°	823.9	30.2
0°-40°	1337.0	48.9
0°-60°	2287.5	83.7
0°-90°	2732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1076	1074	1077	1074	1099	101
15°	1030	1019	1025	1030	1031	287
25°	921	926	942	954	952	426
35°	802	804	823	842	841	498
45°	645	657	668	685	669	499
55°	482	479	492	488	488	429
65°	296	292	304	292	294	295
75°	123	121	123	114	118	132
85°	15	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1084.0	1084.0	1084.0	1084.0	1084.0
2.5°	1093.4	1085.1	1077.4	1086.4	1091.8
5°	1076.3	1073.8	1076.7	1073.5	1099.4
7.5°	1054.2	1063.8	1069.4	1065.9	1067.5
10°	1042.4	1039.1	1051.5	1060.2	1058.9
12.5°	1029.8	1034.9	1035.6	1044.9	1045.8
15°	1030.5	1018.6	1024.9	1030.2	1030.7
17.5°	990.5	1003.4	1007.7	1019.9	1004.8
20°	985.6	976.2	985.6	998.1	996.1
22.5°	955.5	945.0	965.2	976.2	975.5
25°	921.4	926.4	941.5	953.8	951.9
27.5°	891.4	897.3	918.8	935.8	924.9
30°	868.3	865.4	883.6	898.7	907.1
32.5°	827.0	837.7	858.9	873.9	865.9
35°	802.0	804.3	823.0	842.0	841.4
37.5°	758.2	769.2	795.4	800.7	795.8
40°	720.8	731.8	755.5	761.2	758.9
42.5°	693.2	695.2	715.5	722.1	711.6
45°	645.2	657.3	668.2	685.4	669.1
47.5°	604.3	609.9	633.5	638.1	629.5
50°	567.3	569.2	592.9	587.1	581.5
52.5°	520.7	528.9	542.2	541.1	534.5
55°	482.3	479.1	491.7	488.3	488.2
57.5°	436.3	441.9	452.2	446.9	438.4
60°	393.1	393.3	397.1	391.0	389.9
62.5°	345.1	346.8	347.7	340.2	352.3
65°	296.3	292.4	303.9	292.2	294.2
67.5°	251.4	253.3	252.2	244.9	247.7
70°	205.7	208.3	206.4	198.2	200.7
72.5°	164.0	161.0	162.9	152.6	157.3
75°	123.3	120.8	123.0	114.3	118.3
77.5°	84.0	85.9	84.5	79.9	82.6
80°	55.4	53.9	53.9	51.2	51.8
82.5°	32.3	30.8	30.4	29.5	30.8
85°	15.1	14.7	15.0	14.6	14.0
87.5°	5.5	5.6	5.6	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)