

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: P590377

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590377
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-LD4-2STD-40-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3095.0 lumens
Efficiency: N/A
Efficacy: 92.9 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

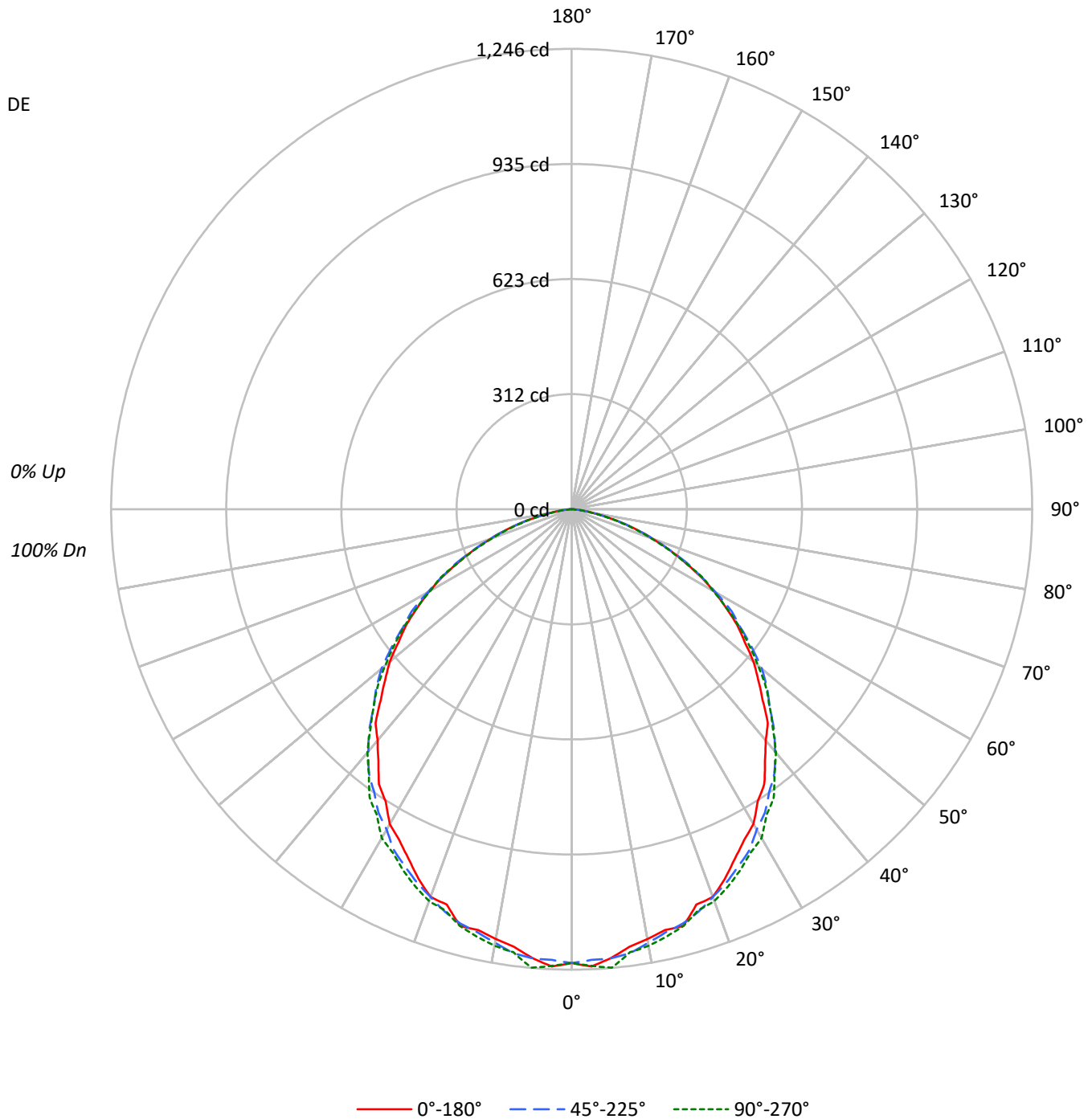
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	3305	3305	3305
5°	3294	3295	3364
10°	3227	3255	3278
15°	3252	3235	3253
20°	3198	3198	3231
25°	3099	3167	3202
30°	3057	3110	3193
35°	2984	3063	3131
40°	2869	3007	3020
45°	2782	2880	2885
50°	2690	2812	2758
55°	2563	2613	2594
60°	2397	2421	2377
65°	2138	2192	2122
70°	1834	1840	1789
75°	1452	1449	1393
80°	973	945	910
85°	528	525	491

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2955 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	3.7
10°-20°	327.4	10.6
20°-30°	490.5	15.8
30°-40°	581.3	18.8
40°-50°	582.4	18.8
50°-60°	494.4	16.0
60°-70°	333.3	10.8
70°-80°	146.4	4.7
80°-90°	23.8	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°	933.4	30.2
0°-40°	1514.7	48.9
0°-60°	2591.4	83.7
0°-90°	3095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1219	1216	1220	1216	1246	115
15°	1167	1154	1161	1167	1168	325
25°	1044	1050	1067	1081	1078	483
35°	908	911	932	954	953	564
45°	731	745	757	776	758	565
55°	546	543	557	553	553	486
65°	336	331	344	331	333	334
75°	140	137	139	130	134	150
85°	17	17	17	16	16	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1238.6	1229.3	1220.6	1230.7	1236.9
5°	1219.3	1216.4	1219.8	1216.1	1245.5
7.5°	1194.2	1205.2	1211.5	1207.6	1209.3
10°	1180.9	1177.1	1191.2	1201.1	1199.6
12.5°	1166.7	1172.4	1173.2	1183.8	1184.7
15°	1167.4	1154.0	1161.1	1167.1	1167.6
17.5°	1122.1	1136.7	1141.6	1155.4	1138.3
20°	1116.6	1105.9	1116.6	1130.7	1128.4
22.5°	1082.5	1070.6	1093.4	1105.9	1105.1
25°	1043.8	1049.5	1066.6	1080.6	1078.3
27.5°	1009.8	1016.5	1040.9	1060.1	1047.7
30°	983.7	980.4	1001.0	1018.1	1027.6
32.5°	936.9	949.0	973.1	990.0	981.0
35°	908.5	911.2	932.3	953.9	953.2
37.5°	858.9	871.4	901.1	907.1	901.6
40°	816.6	829.1	855.9	862.4	859.7
42.5°	785.3	787.5	810.5	818.0	806.1
45°	730.9	744.6	756.9	776.4	758.1
47.5°	684.6	691.0	717.6	722.9	713.2
50°	642.6	644.8	671.6	665.1	658.8
52.5°	589.8	599.2	614.2	613.0	605.5
55°	546.4	542.7	557.0	553.2	553.0
57.5°	494.2	500.6	512.3	506.3	496.6
60°	445.4	445.5	449.8	443.0	441.7
62.5°	391.0	392.9	393.9	385.5	399.1
65°	335.7	331.2	344.2	331.1	333.3
67.5°	284.8	287.0	285.7	277.5	280.6
70°	233.1	235.9	233.9	224.5	227.4
72.5°	185.8	182.3	184.6	172.8	178.2
75°	139.7	136.8	139.4	129.5	134.0
77.5°	95.1	97.4	95.8	90.5	93.5
80°	62.8	61.0	61.0	58.0	58.7
82.5°	36.6	34.9	34.4	33.5	34.9
85°	17.1	16.6	17.0	16.5	15.9
87.5°	6.2	6.3	6.3	6.0	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)