

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: P589979

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589979
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-LD4-1LO-40-UNV-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1459.0 lumens
Efficiency: N/A
Efficacy: 124.7 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

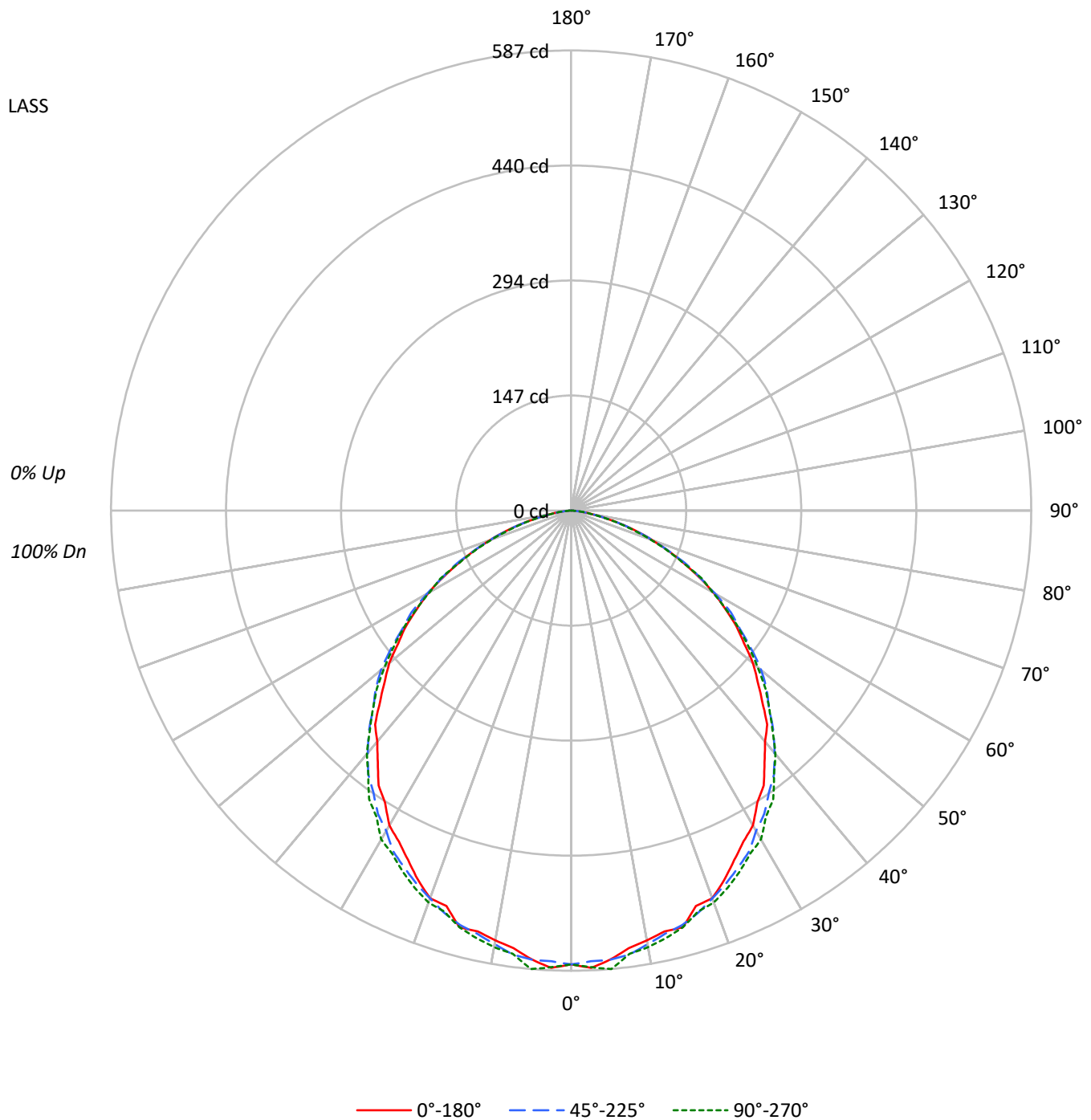
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1558	1558	1558
5°	1553	1553	1586
10°	1521	1535	1545
15°	1533	1525	1533
20°	1507	1507	1523
25°	1461	1493	1509
30°	1441	1466	1505
35°	1407	1444	1476
40°	1352	1417	1424
45°	1311	1358	1360
50°	1268	1325	1300
55°	1209	1232	1223
60°	1130	1141	1121
65°	1007	1033	1000
70°	865	867	843
75°	684	683	657
80°	459	446	429
85°	250	247	232

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1393 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.5	3.7
10°-20°	154.3	10.6
20°-30°	231.2	15.8
30°-40°	274.0	18.8
40°-50°	274.5	18.8
50°-60°	233.1	16.0
60°-70°	157.1	10.8
70°-80°	69.0	4.7
80°-90°	11.2	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°	440.0	30.2
0°-40°	714.0	48.9
0°-60°	1221.6	83.7
0°-90°	1459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	579	579	579	579	579	
5°	575	573	575	573	587	54
15°	550	544	547	550	550	153
25°	492	495	503	509	508	227
35°	428	430	440	450	449	266
45°	345	351	357	366	357	267
55°	258	256	263	261	261	229
65°	158	156	162	156	157	157
75°	66	64	66	61	63	71
85°	8	8	8	8	8	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	578.9	578.9	578.9	578.9	578.9
2.5°	583.9	579.5	575.4	580.2	583.1
5°	574.8	573.4	575.0	573.3	587.1
7.5°	563.0	568.1	571.1	569.3	570.1
10°	556.7	554.9	561.6	566.2	565.5
12.5°	550.0	552.7	553.0	558.0	558.5
15°	550.3	544.0	547.4	550.2	550.4
17.5°	529.0	535.8	538.2	544.7	536.6
20°	526.3	521.3	526.3	533.0	532.0
22.5°	510.3	504.7	515.4	521.3	521.0
25°	492.0	494.7	502.8	509.4	508.3
27.5°	476.0	479.2	490.7	499.7	493.9
30°	463.7	462.1	471.9	479.9	484.4
32.5°	441.7	447.3	458.7	466.7	462.4
35°	428.3	429.6	439.5	449.7	449.4
37.5°	404.9	410.8	424.8	427.6	425.0
40°	384.9	390.8	403.5	406.5	405.3
42.5°	370.2	371.3	382.1	385.6	380.0
45°	344.6	351.0	356.8	366.0	357.4
47.5°	322.7	325.7	338.3	340.8	336.2
50°	302.9	304.0	316.6	313.6	310.6
52.5°	278.0	282.5	289.6	289.0	285.4
55°	257.6	255.8	262.6	260.8	260.7
57.5°	233.0	236.0	241.5	238.7	234.1
60°	210.0	210.0	212.0	208.8	208.2
62.5°	184.3	185.2	185.7	181.7	188.1
65°	158.2	156.1	162.3	156.1	157.1
67.5°	134.2	135.3	134.7	130.8	132.3
70°	109.9	111.2	110.2	105.8	107.2
72.5°	87.6	86.0	87.0	81.5	84.0
75°	65.8	64.5	65.7	61.1	63.2
77.5°	44.8	45.9	45.1	42.7	44.1
80°	29.6	28.8	28.8	27.4	27.7
82.5°	17.3	16.4	16.2	15.8	16.4
85°	8.1	7.8	8.0	7.8	7.5
87.5°	2.9	3.0	3.0	2.8	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)