

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: P590395

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590395
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3973.0 lumens
Efficiency: N/A
Efficacy: 119.3 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

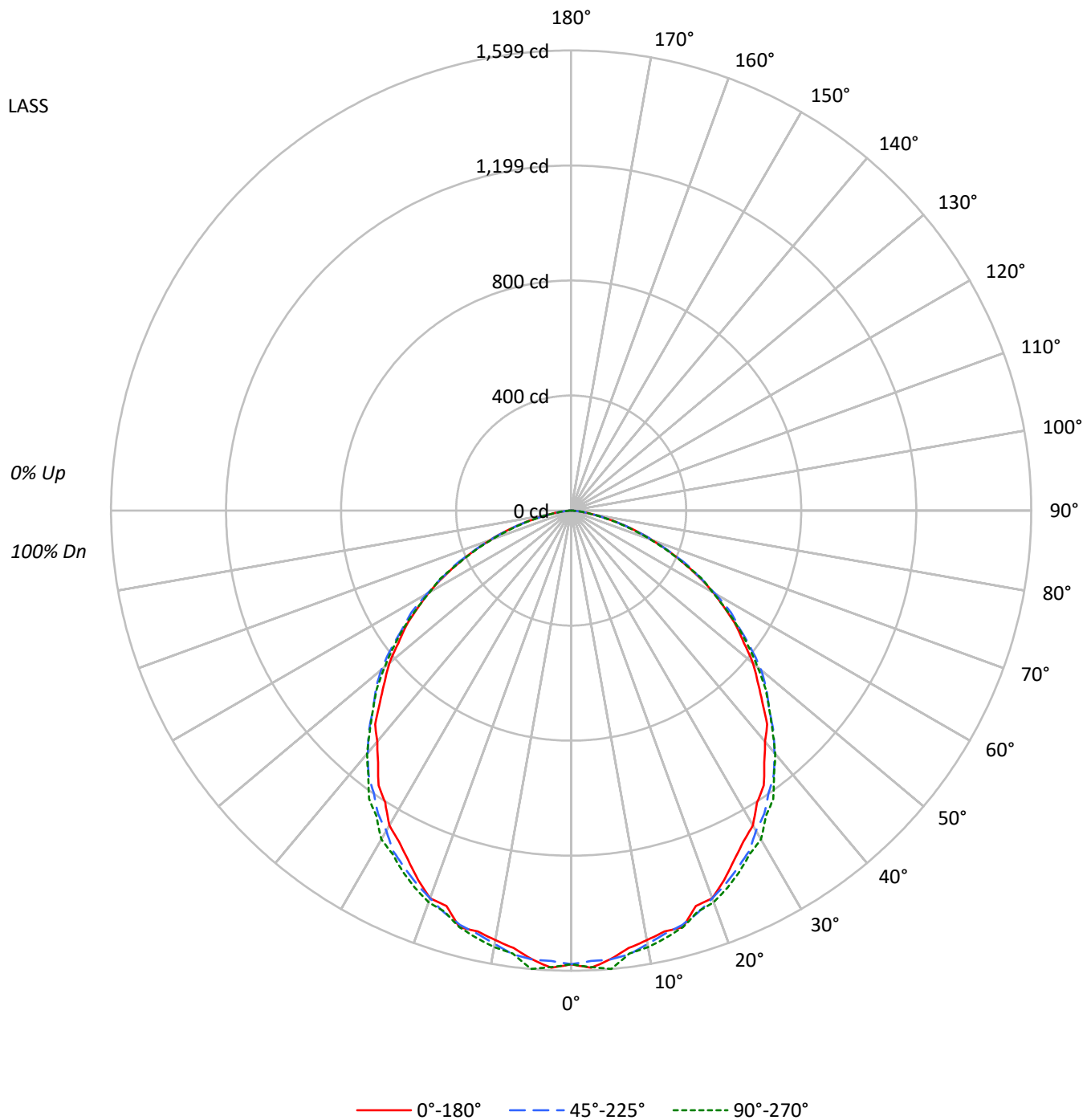
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4242	4242	4242
5°	4228	4230	4319
10°	4142	4179	4208
15°	4175	4152	4176
20°	4105	4105	4148
25°	3978	4065	4110
30°	3924	3993	4099
35°	3831	3932	4020
40°	3682	3860	3877
45°	3571	3698	3703
50°	3453	3610	3540
55°	3291	3354	3331
60°	3077	3108	3052
65°	2744	2814	2724
70°	2354	2362	2297
75°	1864	1860	1788
80°	1249	1215	1167
85°	679	673	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3793 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	3.7
10°-20°	420.3	10.6
20°-30°	629.6	15.8
30°-40°	746.2	18.8
40°-50°	747.6	18.8
50°-60°	634.6	16.0
60°-70°	427.9	10.8
70°-80°	188.0	4.7
80°-90°	30.6	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°	1198.2	30.2
0°-40°	1944.4	48.9
0°-60°	3326.6	83.7
0°-90°	3973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1565	1562	1566	1561	1599	148
15°	1499	1481	1490	1498	1499	418
25°	1340	1347	1369	1387	1384	619
35°	1166	1170	1197	1224	1224	724
45°	938	956	972	997	973	726
55°	701	697	715	710	710	624
65°	431	425	442	425	428	429
75°	179	176	179	166	172	192
85°	22	21	22	21	20	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1576.4	1576.4	1576.4	1576.4	1576.4
2.5°	1590.0	1578.0	1566.8	1579.8	1587.8
5°	1565.2	1561.5	1565.8	1561.1	1598.8
7.5°	1533.0	1547.1	1555.2	1550.1	1552.4
10°	1515.9	1511.1	1529.2	1541.8	1540.0
12.5°	1497.6	1504.9	1506.0	1519.6	1520.8
15°	1498.6	1481.3	1490.5	1498.2	1498.8
17.5°	1440.4	1459.1	1465.5	1483.2	1461.2
20°	1433.3	1419.7	1433.3	1451.4	1448.6
22.5°	1389.5	1374.3	1403.6	1419.7	1418.6
25°	1339.9	1347.2	1369.2	1387.1	1384.2
27.5°	1296.3	1304.9	1336.2	1360.8	1345.0
30°	1262.7	1258.5	1284.9	1306.9	1319.1
32.5°	1202.7	1218.2	1249.1	1270.9	1259.3
35°	1166.3	1169.7	1196.8	1224.5	1223.7
37.5°	1102.6	1118.6	1156.7	1164.4	1157.3
40°	1048.2	1064.3	1098.7	1107.0	1103.6
42.5°	1008.1	1011.0	1040.5	1050.0	1034.8
45°	938.3	955.8	971.7	996.7	973.1
47.5°	878.9	887.0	921.2	927.9	915.5
50°	824.9	827.8	862.2	853.8	845.7
52.5°	757.2	769.2	788.5	786.9	777.3
55°	701.4	696.7	715.0	710.1	709.9
57.5°	634.4	642.6	657.6	649.9	637.5
60°	571.7	571.9	577.4	568.7	567.1
62.5°	501.9	504.4	505.6	494.8	512.3
65°	430.9	425.2	441.9	425.0	427.8
67.5°	365.6	368.4	366.8	356.2	360.3
70°	299.2	302.9	300.2	288.2	291.9
72.5°	238.5	234.1	236.9	221.9	228.8
75°	179.3	175.7	178.9	166.3	172.0
77.5°	122.1	125.0	122.9	116.2	120.1
80°	80.6	78.4	78.4	74.5	75.3
82.5°	47.0	44.8	44.2	42.9	44.8
85°	22.0	21.4	21.8	21.2	20.4
87.5°	7.9	8.1	8.1	7.7	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)