

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: P561251

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561251
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1STD-40-UNV-93-85-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3295.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

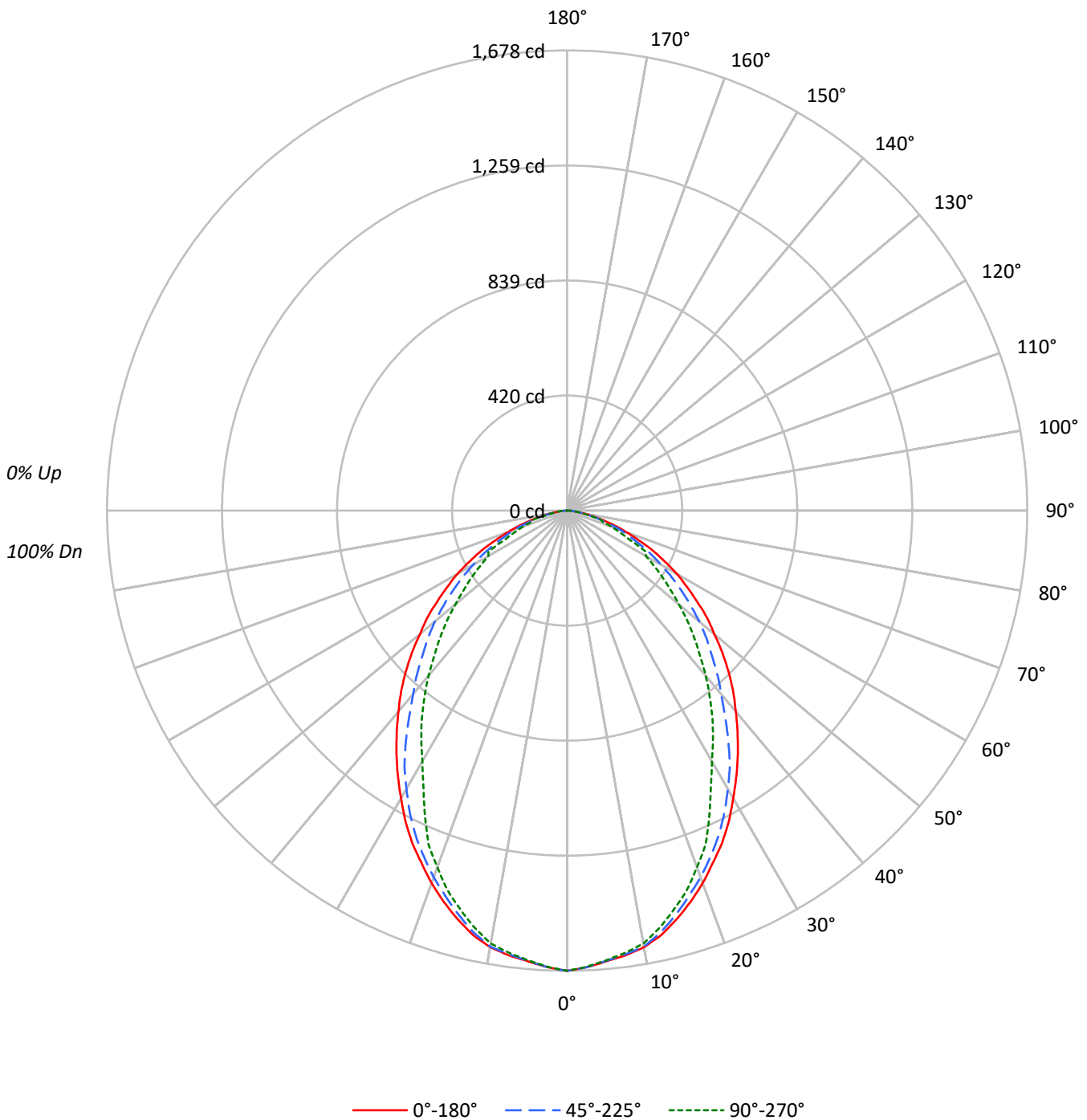
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4517	4517	4517
5°	4455	4450	4445
10°	4417	4411	4380
15°	4298	4254	4195
20°	4140	4073	3962
25°	3969	3883	3641
30°	3762	3642	3280
35°	3563	3366	3034
40°	3360	3067	2761
45°	3168	2836	2496
50°	2933	2632	2226
55°	2713	2385	1993
60°	2485	2130	1786
65°	2187	1866	1582
70°	1802	1633	1344
75°	1433	1251	1311
80°	962	902	841
85°	599	719	840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3168 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.2	4.7
10°-20°	428.8	13.0
20°-30°	593.6	18.0
30°-40°	633.0	19.2
40°-50°	577.5	17.5
50°-60°	452.4	13.7
60°-70°	294.8	8.9
70°-80°	130.6	4.0
80°-90°	28.1	0.9
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°	1178.6	35.8
0°-40°	1811.6	55.0
0°-60°	2841.5	86.2
0°-90°	3295.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3295.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1649	1647	1647	1645	1645	157
15°	1543	1543	1527	1512	1506	434
25°	1337	1329	1308	1261	1226	614
35°	1085	1077	1024	947	924	678
45°	832	815	745	683	656	641
55°	578	561	508	448	425	519
65°	343	324	293	299	248	338
75°	138	128	120	114	126	148
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1678.4	1678.4	1678.4	1678.4	1678.4
2.5°	1666.8	1666.8	1666.8	1664.8	1664.8
5°	1649.3	1647.4	1647.4	1645.4	1645.4
7.5°	1635.7	1633.8	1631.9	1629.9	1626.0
10°	1616.3	1616.3	1614.4	1604.7	1602.8
12.5°	1585.3	1583.4	1575.6	1562.0	1558.1
15°	1542.6	1542.6	1527.1	1511.6	1505.7
17.5°	1496.0	1494.1	1474.7	1459.2	1451.4
20°	1445.6	1441.7	1422.3	1397.1	1383.5
22.5°	1389.3	1389.3	1366.0	1333.0	1319.5
25°	1336.9	1329.2	1307.8	1261.2	1226.3
27.5°	1276.8	1265.1	1241.8	1175.9	1135.1
30°	1210.8	1205.0	1172.0	1086.6	1055.6
32.5°	1148.7	1139.0	1104.1	1014.8	989.6
35°	1084.7	1076.9	1024.5	946.9	923.6
37.5°	1020.6	1010.9	945.0	882.9	853.8
40°	956.6	945.0	873.2	816.9	785.9
42.5°	896.5	880.9	811.1	750.9	716.0
45°	832.4	815.0	745.1	683.0	655.8
47.5°	768.4	752.9	688.8	624.8	593.8
50°	700.5	686.9	628.7	564.7	531.7
52.5°	644.2	622.9	566.6	502.6	475.4
55°	578.2	560.8	508.4	448.2	424.9
57.5°	518.1	500.6	452.1	395.8	376.4
60°	461.8	436.6	395.8	347.3	331.8
62.5°	399.7	380.3	345.4	304.6	324.0
65°	343.4	324.0	293.0	298.8	248.4
67.5°	281.4	271.7	244.5	217.3	209.6
70°	229.0	217.3	207.6	178.5	170.8
72.5°	182.4	170.8	157.2	141.6	135.8
75°	137.8	128.1	120.3	114.5	126.1
77.5°	95.1	91.2	85.4	79.6	77.6
80°	62.1	60.2	58.2	56.3	54.3
82.5°	36.9	36.9	36.9	36.9	36.9
85°	19.4	21.3	23.3	25.2	27.2
87.5°	11.6	11.6	13.6	15.5	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)