

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: P561279

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561279
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-50-UNV-80-97-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 3260.0 lumens
Efficiency: N/A
Efficacy: 97.9 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

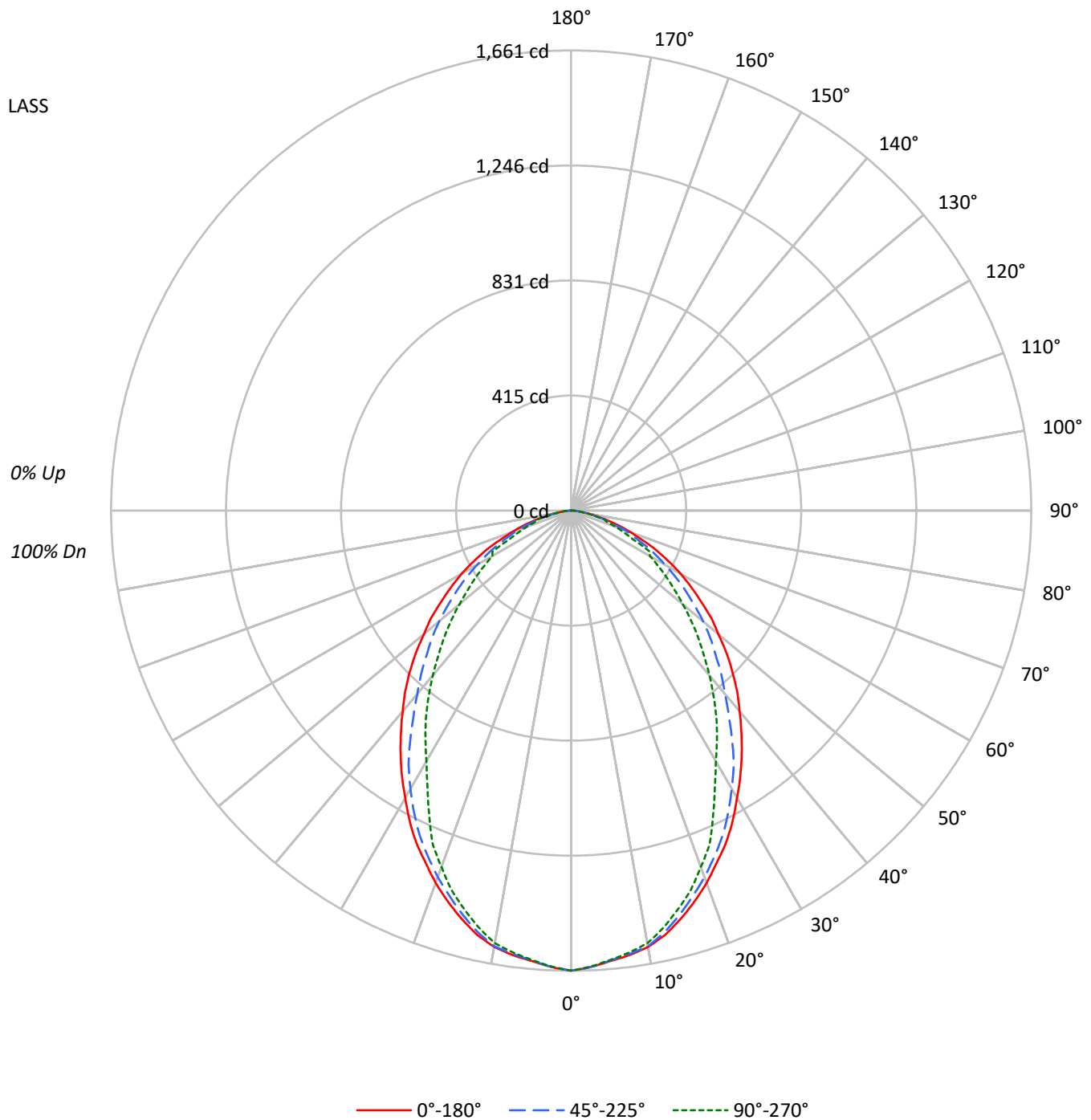
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4469	4469	4469
5°	4408	4403	4398
10°	4370	4364	4333
15°	4252	4209	4150
20°	4096	4030	3920
25°	3927	3842	3602
30°	3722	3603	3245
35°	3526	3330	3002
40°	3325	3035	2731
45°	3134	2806	2469
50°	2901	2604	2202
55°	2684	2360	1972
60°	2459	2108	1767
65°	2164	1846	1564
70°	1782	1616	1329
75°	1417	1237	1298
80°	951	893	834
85°	593	710	831

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3134 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.6	4.7
10°-20°	424.2	13.0
20°-30°	587.3	18.0
30°-40°	626.2	19.2
40°-50°	571.3	17.5
50°-60°	447.6	13.7
60°-70°	291.7	8.9
70°-80°	129.2	4.0
80°-90°	27.8	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°	1166.1	35.8
0°-40°	1792.4	55.0
0°-60°	2811.3	86.2
0°-90°	3260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1661	1661	1661	1661	1661	
5°	1632	1630	1630	1628	1628	155
15°	1526	1526	1511	1496	1490	429
25°	1323	1315	1294	1248	1213	607
35°	1073	1066	1014	937	914	671
45°	824	806	737	676	649	634
55°	572	555	503	444	420	513
65°	340	321	290	296	246	335
75°	136	127	119	113	125	146
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°	1660.6	1660.6	1660.6	1660.6	1660.6
2.5°	1649.1	1649.1	1649.1	1647.2	1647.2
5°	1631.8	1629.9	1629.9	1628.0	1628.0
7.5°	1618.4	1616.4	1614.5	1612.6	1608.8
10°	1599.2	1599.2	1597.2	1587.6	1585.7
12.5°	1568.5	1566.5	1558.9	1545.4	1541.6
15°	1526.2	1526.2	1510.9	1495.5	1489.7
17.5°	1480.1	1478.2	1459.0	1443.7	1436.0
20°	1430.2	1426.4	1407.2	1382.2	1368.8
22.5°	1374.6	1374.6	1351.5	1318.9	1305.4
25°	1322.7	1315.0	1293.9	1247.9	1213.3
27.5°	1263.2	1251.7	1228.7	1163.4	1123.1
30°	1197.9	1192.2	1159.5	1075.1	1044.4
32.5°	1136.5	1126.9	1092.3	1004.0	979.1
35°	1073.2	1065.5	1013.6	936.8	913.8
37.5°	1009.8	1000.2	934.9	873.5	844.7
40°	946.4	934.9	863.9	808.2	777.5
42.5°	886.9	871.6	802.5	743.0	708.4
45°	823.6	806.3	737.2	675.8	648.9
47.5°	760.2	744.9	681.5	618.2	587.4
50°	693.0	679.6	622.0	558.7	526.0
52.5°	637.4	616.2	560.6	497.2	470.3
55°	572.1	554.8	503.0	443.5	420.4
57.5°	512.6	495.3	447.3	391.6	372.4
60°	456.9	431.9	391.6	343.6	328.3
62.5°	395.5	376.3	341.7	301.4	320.6
65°	339.8	320.6	289.9	295.6	245.7
67.5°	278.4	268.8	241.9	215.0	207.3
70°	226.5	215.0	205.4	176.6	168.9
72.5°	180.5	168.9	155.5	140.1	134.4
75°	136.3	126.7	119.0	113.3	124.8
77.5°	94.1	90.2	84.5	78.7	76.8
80°	61.4	59.5	57.6	55.7	53.8
82.5°	36.5	36.5	36.5	36.5	36.5
85°	19.2	21.1	23.0	25.0	26.9
87.5°	11.5	11.5	13.4	15.4	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)