

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: P562364

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562364
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-24-4-LD4-1STD-40-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3283.0 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

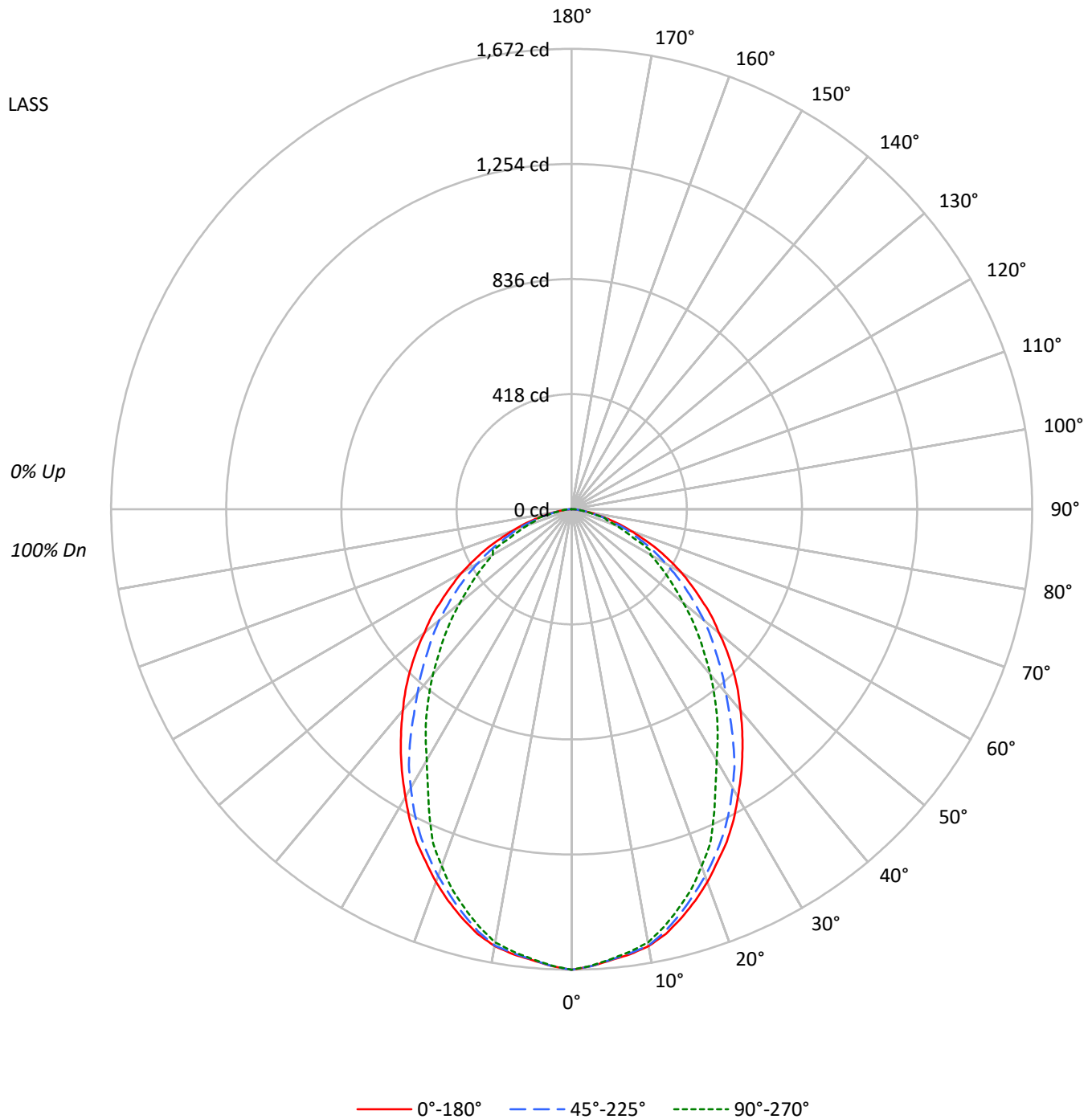
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2250	2250	2250
5°	2219	2217	2214
10°	2200	2198	2182
15°	2141	2119	2090
20°	2062	2029	1974
25°	1978	1935	1814
30°	1874	1814	1634
35°	1775	1677	1512
40°	1674	1528	1375
45°	1578	1413	1243
50°	1461	1311	1109
55°	1351	1188	993
60°	1238	1061	890
65°	1089	929	788
70°	897	814	669
75°	714	623	653
80°	480	449	419
85°	298	358	418

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1578 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	4.7
10°-20°	427.2	13.0
20°-30°	591.5	18.0
30°-40°	630.7	19.2
40°-50°	575.3	17.5
50°-60°	450.7	13.7
60°-70°	293.8	8.9
70°-80°	130.2	4.0
80°-90°	27.9	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°	1174.4	35.8
0°-40°	1805.0	55.0
0°-60°	2831.1	86.2
0°-90°	3283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3283.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1672	1672	1672	1672	1672	
5°	1643	1641	1641	1640	1640	156
15°	1537	1537	1522	1506	1500	432
25°	1332	1324	1303	1257	1222	612
35°	1081	1073	1021	944	920	676
45°	829	812	742	680	654	639
55°	576	559	506	447	423	517
65°	342	323	292	298	248	337
75°	137	128	120	114	126	147
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°	1672.3	1672.3	1672.3	1672.3	1672.3
2.5°	1660.7	1660.7	1660.7	1658.8	1658.8
5°	1643.3	1641.4	1641.4	1639.5	1639.5
7.5°	1629.8	1627.9	1625.9	1624.0	1620.1
10°	1610.5	1610.5	1608.5	1598.9	1596.9
12.5°	1579.5	1577.6	1569.9	1556.3	1552.5
15°	1537.0	1537.0	1521.5	1506.1	1500.3
17.5°	1490.6	1488.7	1469.3	1453.9	1446.1
20°	1440.3	1436.5	1417.1	1392.0	1378.5
22.5°	1384.3	1384.3	1361.1	1328.2	1314.7
25°	1332.1	1324.3	1303.1	1256.7	1221.9
27.5°	1272.1	1260.5	1237.3	1171.6	1131.0
30°	1206.4	1200.6	1167.7	1082.7	1051.7
32.5°	1144.5	1134.9	1100.1	1011.1	986.0
35°	1080.7	1073.0	1020.8	943.5	920.3
37.5°	1016.9	1007.3	941.5	879.7	850.7
40°	953.1	941.5	870.0	813.9	783.0
42.5°	893.2	877.7	808.1	748.2	713.4
45°	829.4	812.0	742.4	680.5	653.5
47.5°	765.6	750.1	686.3	622.5	591.6
50°	697.9	684.4	626.4	562.6	529.7
52.5°	641.9	620.6	564.5	500.7	473.7
55°	576.1	558.7	506.5	446.6	423.4
57.5°	516.2	498.8	450.5	394.4	375.1
60°	460.1	435.0	394.4	346.1	330.6
62.5°	398.3	378.9	344.1	303.5	322.9
65°	342.2	322.9	291.9	297.7	247.5
67.5°	280.3	270.7	243.6	216.5	208.8
70°	228.1	216.5	206.9	177.9	170.1
72.5°	181.7	170.1	156.6	141.1	135.3
75°	137.3	127.6	119.9	114.1	125.7
77.5°	94.7	90.9	85.1	79.3	77.3
80°	61.9	59.9	58.0	56.1	54.1
82.5°	36.7	36.7	36.7	36.7	36.7
85°	19.3	21.3	23.2	25.1	27.1
87.5°	11.6	11.6	13.5	15.5	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)