

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: P562298

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562298
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-35-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3273.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

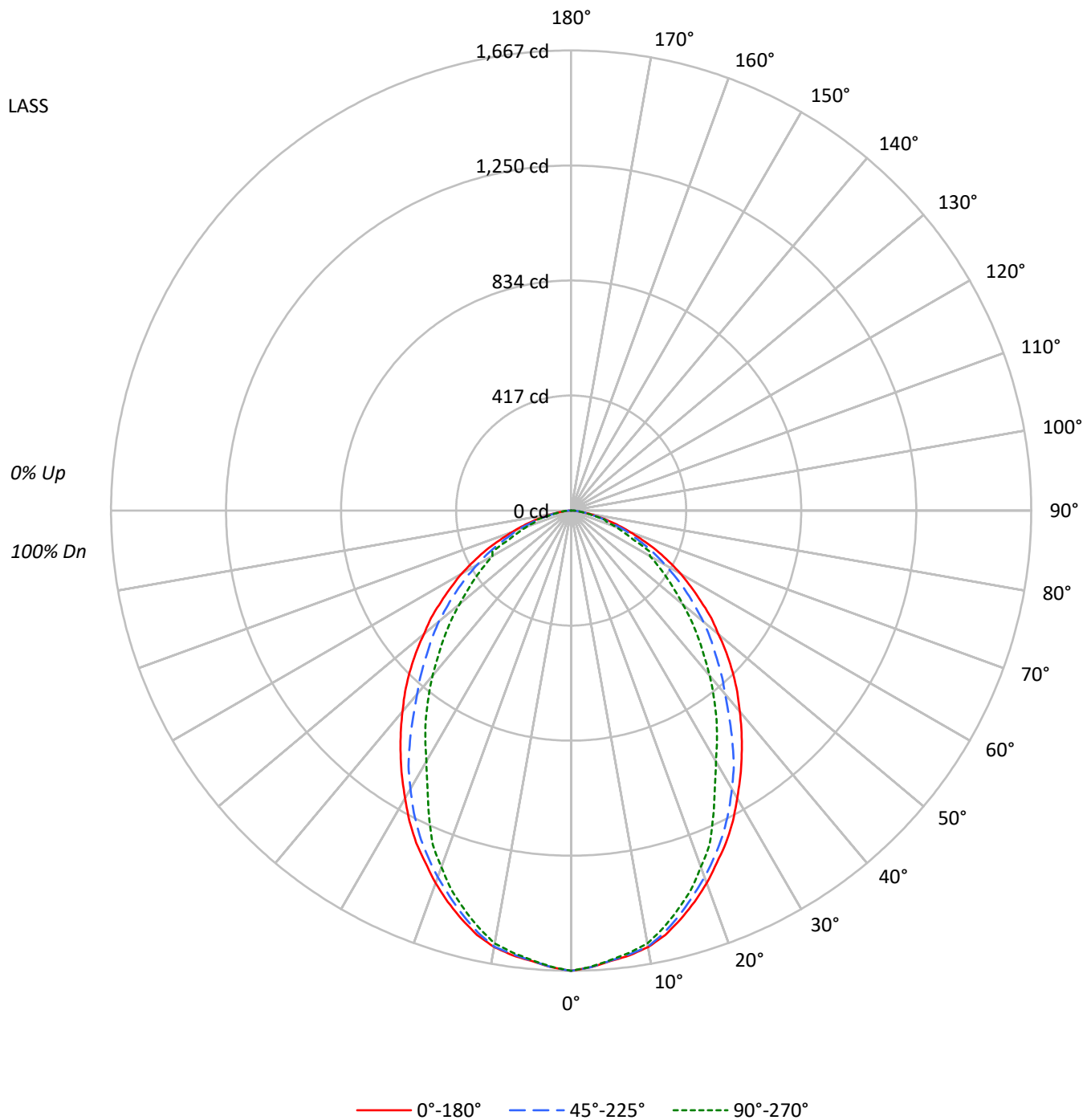
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2243	2243	2243
5°	2213	2210	2208
10°	2194	2191	2175
15°	2134	2113	2083
20°	2056	2023	1968
25°	1972	1929	1808
30°	1869	1809	1629
35°	1770	1672	1507
40°	1669	1523	1371
45°	1573	1408	1240
50°	1456	1307	1105
55°	1347	1185	990
60°	1234	1058	887
65°	1086	926	785
70°	895	811	667
75°	711	621	651
80°	478	448	418
85°	298	357	417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	4.7
10°-20°	425.9	13.0
20°-30°	589.7	18.0
30°-40°	628.8	19.2
40°-50°	573.6	17.5
50°-60°	449.4	13.7
60°-70°	292.9	8.9
70°-80°	129.8	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°	1170.8	35.8
0°-40°	1799.5	55.0
0°-60°	2822.5	86.2
0°-90°	3273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3273.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1667	1667	1667	1667	1667	
5°	1638	1636	1636	1634	1634	156
15°	1532	1532	1517	1502	1496	431
25°	1328	1320	1299	1253	1218	610
35°	1077	1070	1018	941	918	674
45°	827	810	740	678	652	637
55°	574	557	505	445	422	515
65°	341	322	291	297	247	336
75°	137	127	120	114	125	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°	1667.2	1667.2	1667.2	1667.2	1667.2
2.5°	1655.7	1655.7	1655.7	1653.7	1653.7
5°	1638.3	1636.4	1636.4	1634.5	1634.5
7.5°	1624.8	1622.9	1621.0	1619.0	1615.2
10°	1605.5	1605.5	1603.6	1594.0	1592.1
12.5°	1574.7	1572.8	1565.1	1551.6	1547.7
15°	1532.3	1532.3	1516.9	1501.5	1495.7
17.5°	1486.0	1484.1	1464.8	1449.4	1441.7
20°	1435.9	1432.1	1412.8	1387.7	1374.3
22.5°	1380.0	1380.0	1356.9	1324.1	1310.6
25°	1328.0	1320.3	1299.1	1252.8	1218.1
27.5°	1268.2	1256.7	1233.6	1168.0	1127.5
30°	1202.7	1196.9	1164.2	1079.4	1048.5
32.5°	1141.0	1131.4	1096.7	1008.0	983.0
35°	1077.4	1069.7	1017.7	940.6	917.5
37.5°	1013.8	1004.2	938.7	877.0	848.1
40°	950.2	938.7	867.3	811.4	780.6
42.5°	890.5	875.1	805.7	745.9	711.2
45°	826.9	809.5	740.1	678.5	651.5
47.5°	763.3	747.8	684.2	620.6	589.8
50°	695.8	682.3	624.5	560.9	528.1
52.5°	639.9	618.7	562.8	499.2	472.2
55°	574.4	557.0	505.0	445.2	422.1
57.5°	514.6	497.3	449.1	393.2	373.9
60°	458.7	433.7	393.2	345.0	329.6
62.5°	397.0	377.8	343.1	302.6	321.9
65°	341.2	321.9	291.0	296.8	246.7
67.5°	279.5	269.8	242.9	215.9	208.2
70°	227.4	215.9	206.2	177.3	169.6
72.5°	181.2	169.6	156.1	140.7	134.9
75°	136.8	127.2	119.5	113.7	125.3
77.5°	94.4	90.6	84.8	79.0	77.1
80°	61.7	59.8	57.8	55.9	54.0
82.5°	36.6	36.6	36.6	36.6	36.6
85°	19.3	21.2	23.1	25.1	27.0
87.5°	11.6	11.6	13.5	15.4	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)