

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: P562366

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562366
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-80-97-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 3165.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

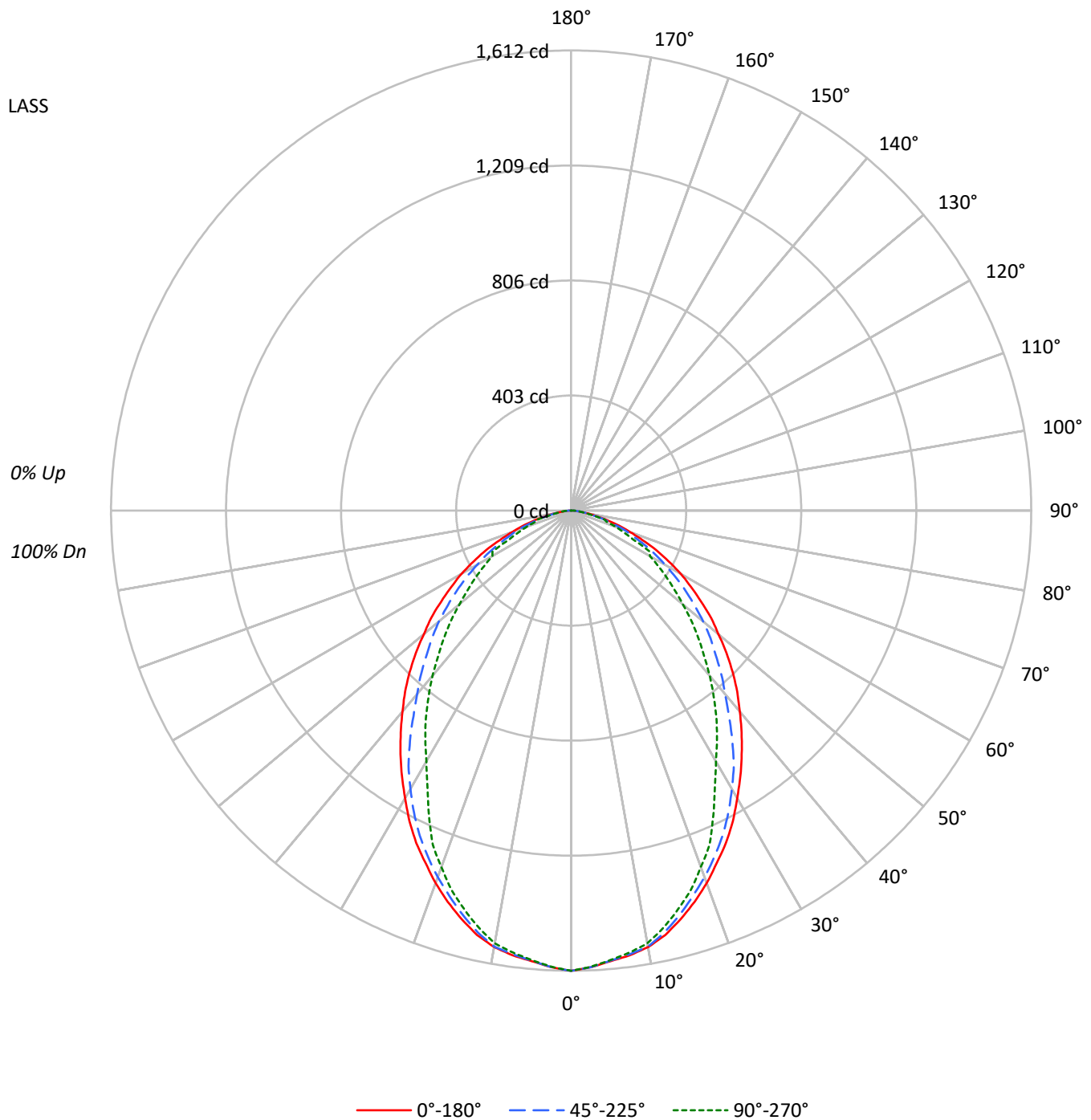
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	2169	2169	2169
5°	2140	2137	2135
10°	2121	2119	2103
15°	2064	2043	2015
20°	1988	1956	1903
25°	1907	1865	1749
30°	1807	1749	1575
35°	1711	1616	1457
40°	1614	1473	1326
45°	1521	1362	1199
50°	1408	1264	1069
55°	1303	1145	958
60°	1194	1023	858
65°	1050	896	760
70°	865	784	645
75°	688	601	630
80°	462	433	404
85°	287	346	403

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1521 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	4.7
10°-20°	411.9	13.0
20°-30°	570.2	18.0
30°-40°	608.0	19.2
40°-50°	554.7	17.5
50°-60°	434.5	13.7
60°-70°	283.2	8.9
70°-80°	125.5	4.0
80°-90°	26.9	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°	1132.1	35.8
0°-40°	1740.1	55.0
0°-60°	2729.4	86.2
0°-90°	3165.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3165.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1612	1612	1612	1612	1612	
5°	1584	1582	1582	1580	1580	150
15°	1482	1482	1467	1452	1446	417
25°	1284	1277	1256	1212	1178	590
35°	1042	1034	984	910	887	651
45°	800	783	716	656	630	616
55°	555	539	488	430	408	498
65°	330	311	281	287	239	325
75°	132	123	116	110	121	142
85°	19	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1612.2	1612.2	1612.2	1612.2	1612.2
2.5°	1601.0	1601.0	1601.0	1599.2	1599.2
5°	1584.3	1582.4	1582.4	1580.5	1580.5
7.5°	1571.2	1569.3	1567.5	1565.6	1561.9
10°	1552.6	1552.6	1550.7	1541.4	1539.5
12.5°	1522.7	1520.9	1513.4	1500.4	1496.7
15°	1481.7	1481.7	1466.8	1451.9	1446.3
17.5°	1437.0	1435.1	1416.5	1401.6	1394.1
20°	1388.5	1384.8	1366.2	1342.0	1328.9
22.5°	1334.5	1334.5	1312.1	1280.4	1267.4
25°	1284.2	1276.7	1256.2	1211.5	1177.9
27.5°	1226.4	1215.2	1192.8	1129.5	1090.3
30°	1163.0	1157.4	1125.8	1043.7	1013.9
32.5°	1103.4	1094.1	1060.5	974.8	950.6
35°	1041.9	1034.4	984.1	909.5	887.2
37.5°	980.4	971.1	907.7	848.0	820.1
40°	918.9	907.7	838.7	784.7	754.8
42.5°	861.1	846.2	779.1	721.3	687.8
45°	799.6	782.8	715.7	656.1	630.0
47.5°	738.1	723.2	661.7	600.2	570.3
50°	672.8	659.8	603.9	542.4	510.7
52.5°	618.8	598.3	544.2	482.7	456.6
55°	555.4	538.6	488.3	430.5	408.2
57.5°	497.6	480.9	434.3	380.2	361.6
60°	443.6	419.4	380.2	333.6	318.7
62.5°	383.9	365.3	331.8	292.6	311.3
65°	329.9	311.3	281.4	287.0	238.6
67.5°	270.3	260.9	234.8	208.7	201.3
70°	219.9	208.7	199.4	171.5	164.0
72.5°	175.2	164.0	151.0	136.1	130.5
75°	132.3	123.0	115.6	110.0	121.1
77.5°	91.3	87.6	82.0	76.4	74.6
80°	59.6	57.8	55.9	54.1	52.2
82.5°	35.4	35.4	35.4	35.4	35.4
85°	18.6	20.5	22.4	24.2	26.1
87.5°	11.2	11.2	13.0	14.9	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)