

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: P562367

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562367
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
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3767.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

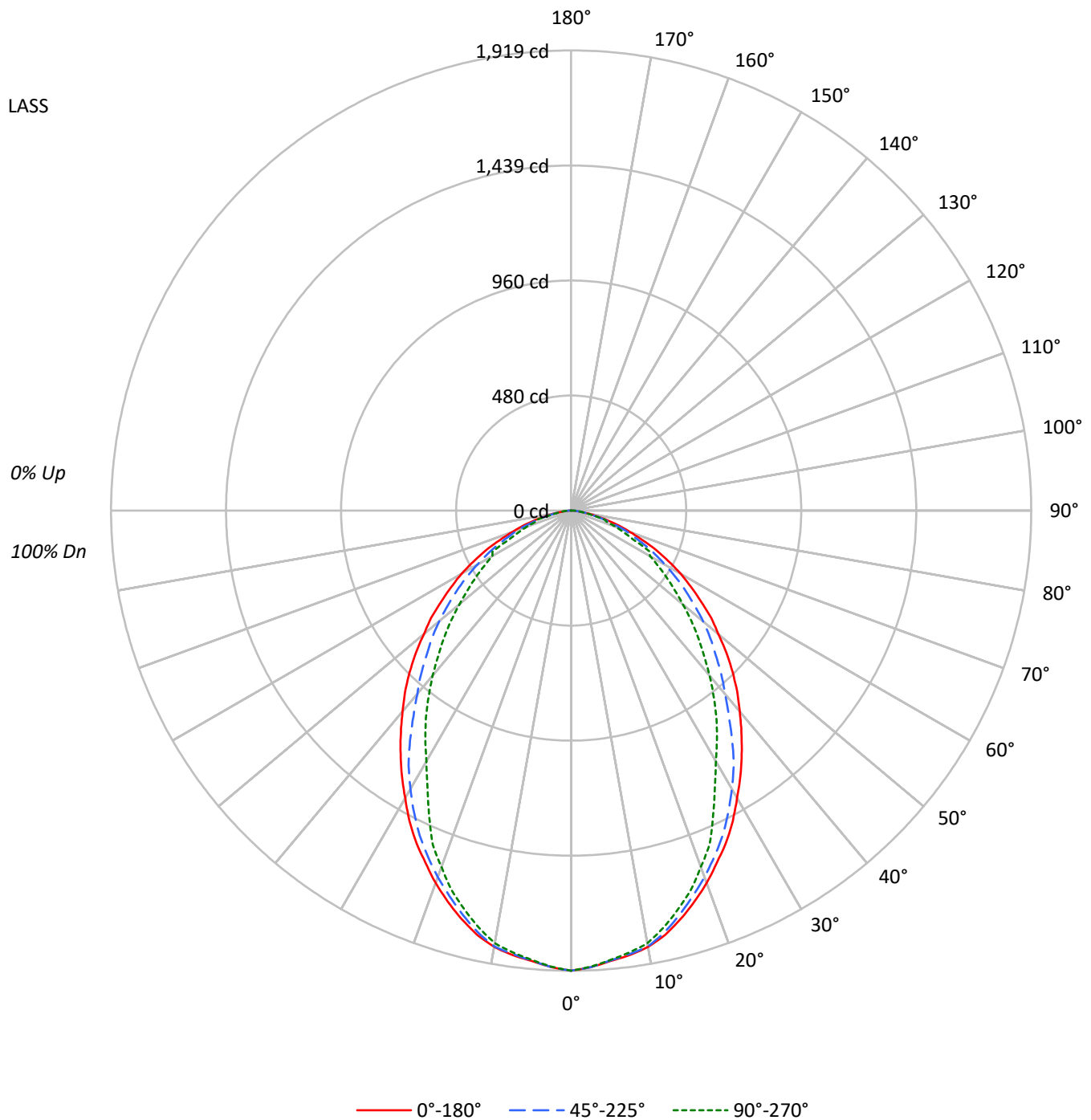
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2582	2582	2582
5°	2547	2544	2541
10°	2525	2522	2503
15°	2457	2432	2398
20°	2366	2328	2265
25°	2269	2220	2081
30°	2151	2082	1875
35°	2037	1924	1734
40°	1921	1753	1578
45°	1811	1621	1427
50°	1676	1504	1272
55°	1551	1363	1140
60°	1421	1218	1021
65°	1250	1067	904
70°	1030	934	768
75°	819	715	750
80°	550	516	481
85°	343	411	480

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1811 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.6	4.7
10°-20°	490.2	13.0
20°-30°	678.7	18.0
30°-40°	723.6	19.2
40°-50°	660.2	17.5
50°-60°	517.2	13.7
60°-70°	337.1	8.9
70°-80°	149.3	4.0
80°-90°	32.0	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°	1347.5	35.8
0°-40°	2071.1	55.0
0°-60°	3248.5	86.2
0°-90°	3767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3767.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1919	1919	1919	1919	1919	
5°	1886	1883	1883	1881	1881	179
15°	1764	1764	1746	1728	1721	496
25°	1528	1520	1495	1442	1402	702
35°	1240	1231	1171	1082	1056	775
45°	952	932	852	781	750	733
55°	661	641	581	512	486	593
65°	393	370	335	342	284	387
75°	158	146	138	131	144	169
85°	22	24	27	29	31	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1918.9	1918.9	1918.9	1918.9	1918.9
2.5°	1905.5	1905.5	1905.5	1903.3	1903.3
5°	1885.6	1883.4	1883.4	1881.1	1881.1
7.5°	1870.1	1867.8	1865.6	1863.4	1859.0
10°	1847.9	1847.9	1845.7	1834.6	1832.3
12.5°	1812.4	1810.2	1801.3	1785.8	1781.3
15°	1763.6	1763.6	1745.8	1728.1	1721.4
17.5°	1710.3	1708.1	1685.9	1668.2	1659.3
20°	1652.7	1648.2	1626.0	1597.2	1581.7
22.5°	1588.3	1588.3	1561.7	1524.0	1508.5
25°	1528.4	1519.6	1495.2	1441.9	1402.0
27.5°	1459.7	1446.4	1419.7	1344.3	1297.7
30°	1384.2	1377.6	1339.9	1242.3	1206.8
32.5°	1313.3	1302.2	1262.2	1160.2	1131.4
35°	1240.0	1231.2	1171.3	1082.5	1055.9
37.5°	1166.8	1155.8	1080.3	1009.3	976.1
40°	1093.6	1080.3	998.3	933.9	898.4
42.5°	1024.9	1007.1	927.3	858.5	818.6
45°	951.7	931.7	851.8	780.9	749.8
47.5°	878.5	860.7	787.5	714.3	678.8
50°	800.8	785.3	718.7	645.5	607.8
52.5°	736.5	712.1	647.8	574.5	543.5
55°	661.1	641.1	581.2	512.4	485.8
57.5°	592.3	572.3	516.9	452.5	430.4
60°	528.0	499.1	452.5	397.1	379.3
62.5°	457.0	434.8	394.9	348.3	370.5
65°	392.6	370.5	335.0	341.6	283.9
67.5°	321.7	310.6	279.5	248.5	239.6
70°	261.8	248.5	237.4	204.1	195.2
72.5°	208.5	195.2	179.7	161.9	155.3
75°	157.5	146.4	137.5	130.9	144.2
77.5°	108.7	104.3	97.6	91.0	88.7
80°	71.0	68.8	66.6	64.3	62.1
82.5°	42.1	42.1	42.1	42.1	42.1
85°	22.2	24.4	26.6	28.8	31.1
87.5°	13.3	13.3	15.5	17.7	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)