

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: P560752

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560752
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-LD4-1HI-35-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3409.0 lumens
Efficiency: N/A
Efficacy: 78.9 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

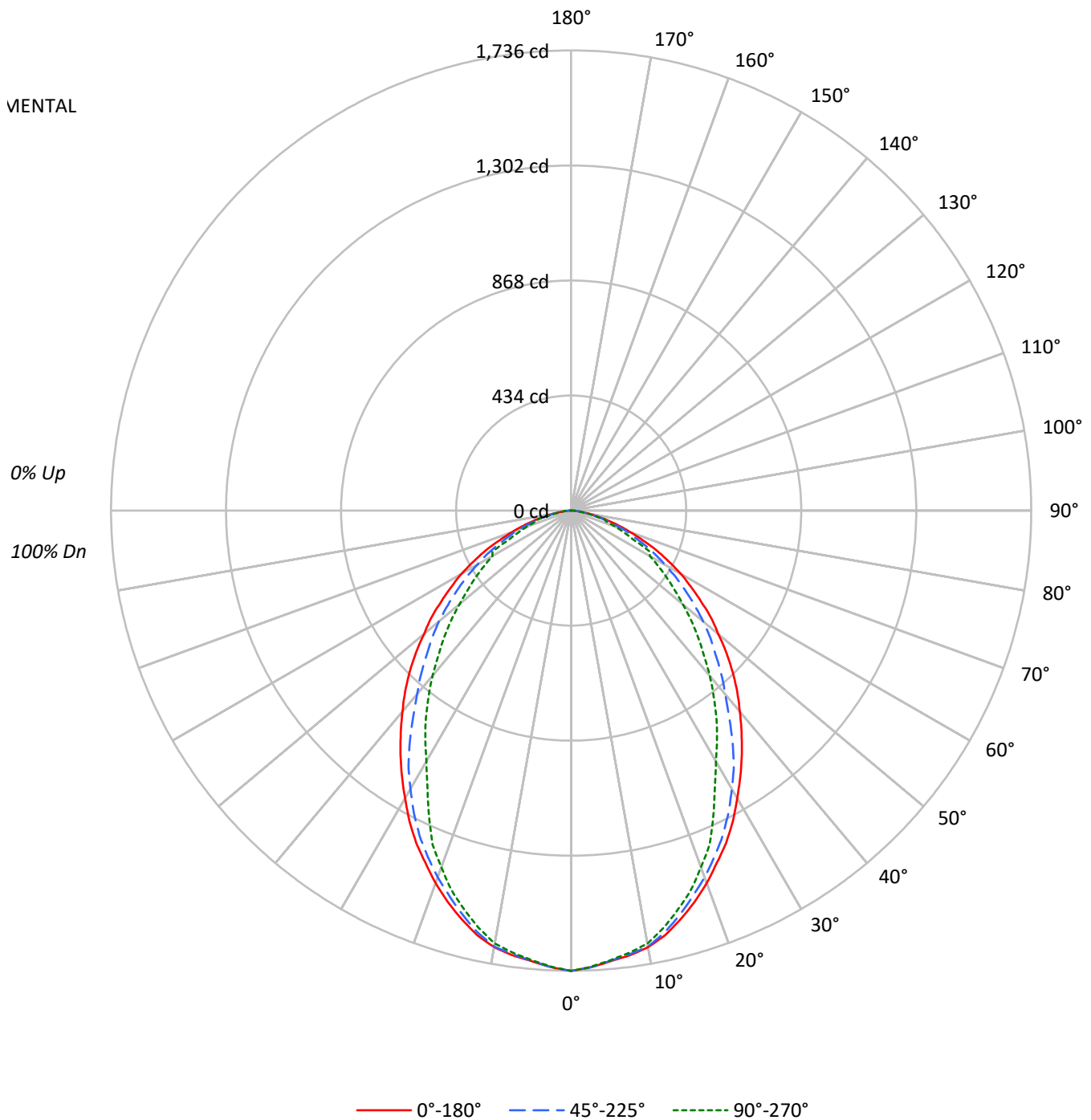
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4673	4673	4673
5°	4609	4604	4599
10°	4570	4564	4531
15°	4446	4401	4340
20°	4283	4214	4099
25°	4107	4018	3767
30°	3892	3768	3393
35°	3687	3482	3139
40°	3477	3173	2856
45°	3277	2934	2582
50°	3034	2723	2303
55°	2807	2468	2062
60°	2571	2204	1848
65°	2262	1930	1636
70°	1864	1690	1390
75°	1482	1294	1357
80°	995	933	871
85°	621	744	868

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3277 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.6	4.7
10°-20°	443.6	13.0
20°-30°	614.2	18.0
30°-40°	654.9	19.2
40°-50°	597.4	17.5
50°-60°	468.0	13.7
60°-70°	305.0	8.9
70°-80°	135.1	4.0
80°-90°	29.0	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°	1219.4	35.8
0°-40°	1874.3	55.0
0°-60°	2939.8	86.2
0°-90°	3409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1736	1736	1736	1736	1736	
5°	1706	1704	1704	1702	1702	162
15°	1596	1596	1580	1564	1558	449
25°	1383	1375	1353	1305	1269	635
35°	1122	1114	1060	980	956	702
45°	861	843	771	707	678	663
55°	598	580	526	464	440	537
65°	355	335	303	309	257	350
75°	142	132	124	118	130	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1736.5	1736.5	1736.5	1736.5	1736.5
2.5°	1724.5	1724.5	1724.5	1722.4	1722.4
5°	1706.4	1704.4	1704.4	1702.4	1702.4
7.5°	1692.3	1690.3	1688.3	1686.3	1682.3
10°	1672.3	1672.3	1670.3	1660.2	1658.2
12.5°	1640.1	1638.1	1630.1	1616.0	1612.0
15°	1596.0	1596.0	1579.9	1563.9	1557.8
17.5°	1547.8	1545.8	1525.7	1509.7	1501.6
20°	1495.6	1491.6	1471.5	1445.4	1431.4
22.5°	1437.4	1437.4	1413.3	1379.2	1365.1
25°	1383.2	1375.1	1353.1	1304.9	1268.7
27.5°	1320.9	1308.9	1284.8	1216.6	1174.4
30°	1252.7	1246.7	1212.5	1124.2	1092.1
32.5°	1188.4	1178.4	1142.3	1049.9	1023.8
35°	1122.2	1114.2	1060.0	979.7	955.6
37.5°	1056.0	1045.9	977.7	913.4	883.3
40°	989.7	977.7	903.4	845.2	813.0
42.5°	927.5	911.4	839.1	776.9	740.8
45°	861.2	843.2	770.9	706.6	678.5
47.5°	795.0	778.9	712.7	646.4	614.3
50°	724.7	710.7	650.4	584.2	550.1
52.5°	666.5	644.4	586.2	519.9	491.8
55°	598.2	580.2	526.0	463.7	439.6
57.5°	536.0	517.9	467.8	409.5	389.5
60°	477.8	451.7	409.5	359.3	343.3
62.5°	413.5	393.5	357.3	315.2	335.3
65°	355.3	335.3	303.1	309.2	257.0
67.5°	291.1	281.1	252.9	224.8	216.8
70°	236.9	224.8	214.8	184.7	176.7
72.5°	188.7	176.7	162.6	146.5	140.5
75°	142.5	132.5	124.5	118.4	130.5
77.5°	98.4	94.4	88.3	82.3	80.3
80°	64.2	62.2	60.2	58.2	56.2
82.5°	38.1	38.1	38.1	38.1	38.1
85°	20.1	22.1	24.1	26.1	28.1
87.5°	12.0	12.0	14.1	16.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)