

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: P562729

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562729
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-LD4-2LO-35-UNV-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4931.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

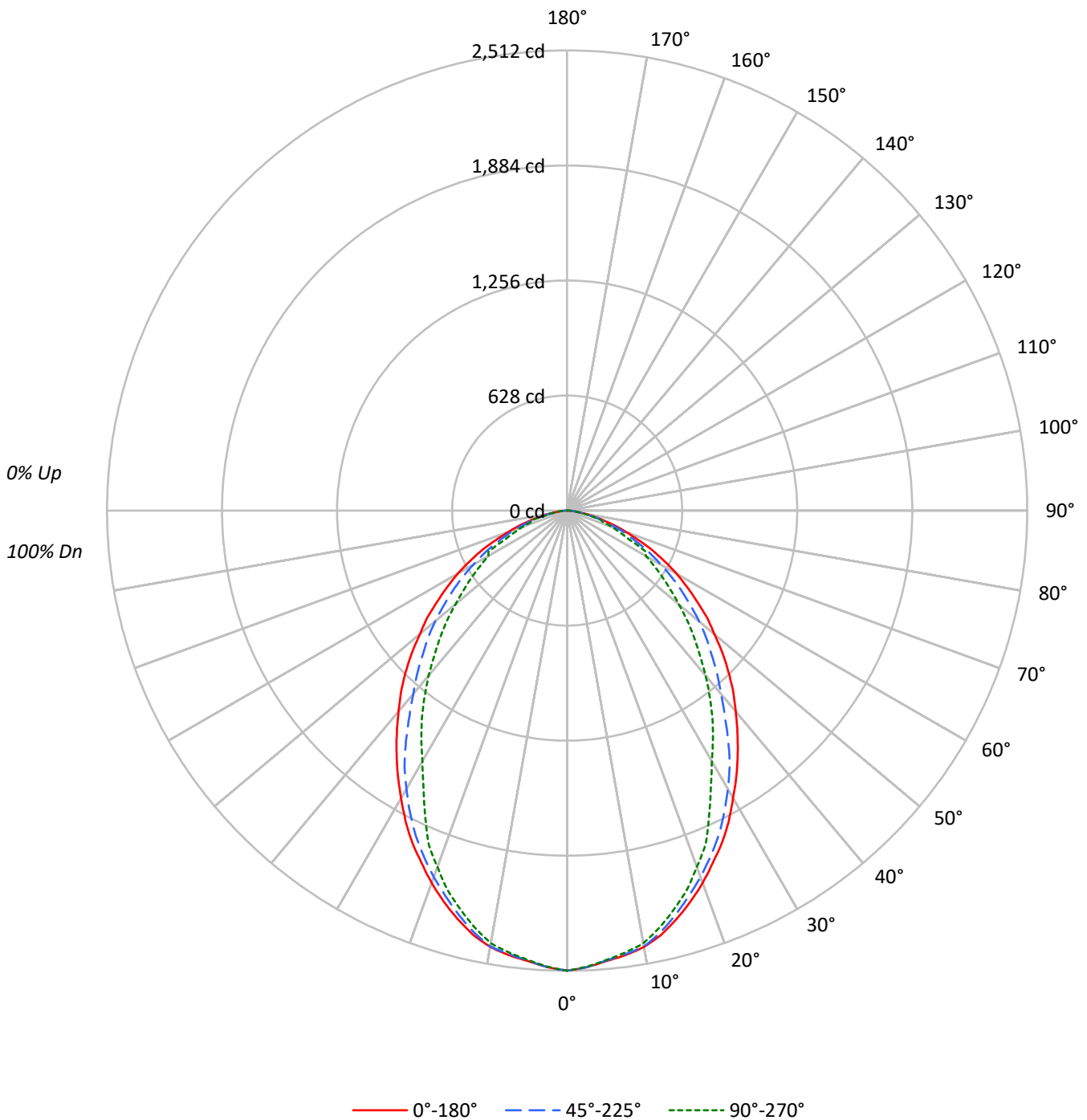
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3380	3380	3380
5°	3334	3330	3326
10°	3305	3301	3277
15°	3216	3183	3139
20°	3097	3048	2964
25°	2970	2906	2725
30°	2815	2725	2454
35°	2666	2518	2270
40°	2514	2295	2066
45°	2370	2122	1868
50°	2194	1969	1665
55°	2030	1785	1492
60°	1860	1594	1336
65°	1636	1396	1183
70°	1348	1222	1005
75°	1072	936	981
80°	720	675	630
85°	448	537	628

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2370 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.8	4.7
10°-20°	641.7	13.0
20°-30°	888.4	18.0
30°-40°	947.3	19.2
40°-50°	864.2	17.5
50°-60°	677.0	13.7
60°-70°	441.2	8.9
70°-80°	195.5	4.0
80°-90°	42.0	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°	1763.9	35.8
0°-40°	2711.1	55.0
0°-60°	4252.3	86.2
0°-90°	4931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2512	2512	2512	2512	2512	
5°	2468	2465	2465	2462	2462	234
15°	2308	2308	2285	2262	2253	649
25°	2001	1989	1957	1888	1835	919
35°	1623	1612	1533	1417	1382	1015
45°	1246	1220	1115	1022	982	960
55°	865	839	761	671	636	776
65°	514	485	438	447	372	507
75°	206	192	180	171	189	221
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2511.8	2511.8	2511.8	2511.8	2511.8
2.5°	2494.4	2494.4	2494.4	2491.5	2491.5
5°	2468.2	2465.3	2465.3	2462.4	2462.4
7.5°	2447.9	2445.0	2442.1	2439.2	2433.4
10°	2418.9	2418.9	2416.0	2401.4	2398.5
12.5°	2372.4	2369.5	2357.9	2337.6	2331.8
15°	2308.5	2308.5	2285.3	2262.1	2253.3
17.5°	2238.8	2235.9	2206.9	2183.7	2172.0
20°	2163.3	2157.5	2128.5	2090.7	2070.4
22.5°	2079.1	2079.1	2044.3	1994.9	1974.6
25°	2000.7	1989.1	1957.2	1887.5	1835.2
27.5°	1910.7	1893.3	1858.4	1759.7	1698.7
30°	1812.0	1803.3	1753.9	1626.1	1579.7
32.5°	1719.0	1704.5	1652.3	1518.7	1480.9
35°	1623.2	1611.6	1533.2	1417.1	1382.2
37.5°	1527.4	1512.9	1414.1	1321.2	1277.7
40°	1431.6	1414.1	1306.7	1222.5	1176.0
42.5°	1341.6	1318.3	1213.8	1123.8	1071.5
45°	1245.7	1219.6	1115.1	1022.1	981.5
47.5°	1149.9	1126.7	1030.8	935.0	888.6
50°	1048.3	1027.9	940.8	845.0	795.6
52.5°	964.1	932.1	847.9	752.1	711.4
55°	865.3	839.2	760.8	670.8	635.9
57.5°	775.3	749.2	676.6	592.4	563.3
60°	691.1	653.4	592.4	519.8	496.5
62.5°	598.2	569.1	516.9	455.9	484.9
65°	514.0	484.9	438.5	447.2	371.7
67.5°	421.1	406.5	365.9	325.2	313.6
70°	342.6	325.2	310.7	267.1	255.5
72.5°	273.0	255.5	235.2	212.0	203.3
75°	206.2	191.7	180.0	171.3	188.7
77.5°	142.3	136.5	127.8	119.1	116.2
80°	92.9	90.0	87.1	84.2	81.3
82.5°	55.2	55.2	55.2	55.2	55.2
85°	29.0	31.9	34.8	37.7	40.7
87.5°	17.4	17.4	20.3	23.2	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)