

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: P561991

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561991
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-LD4-1HI-35-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4264.0 lumens
Efficiency: N/A
Efficacy: 98.7 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

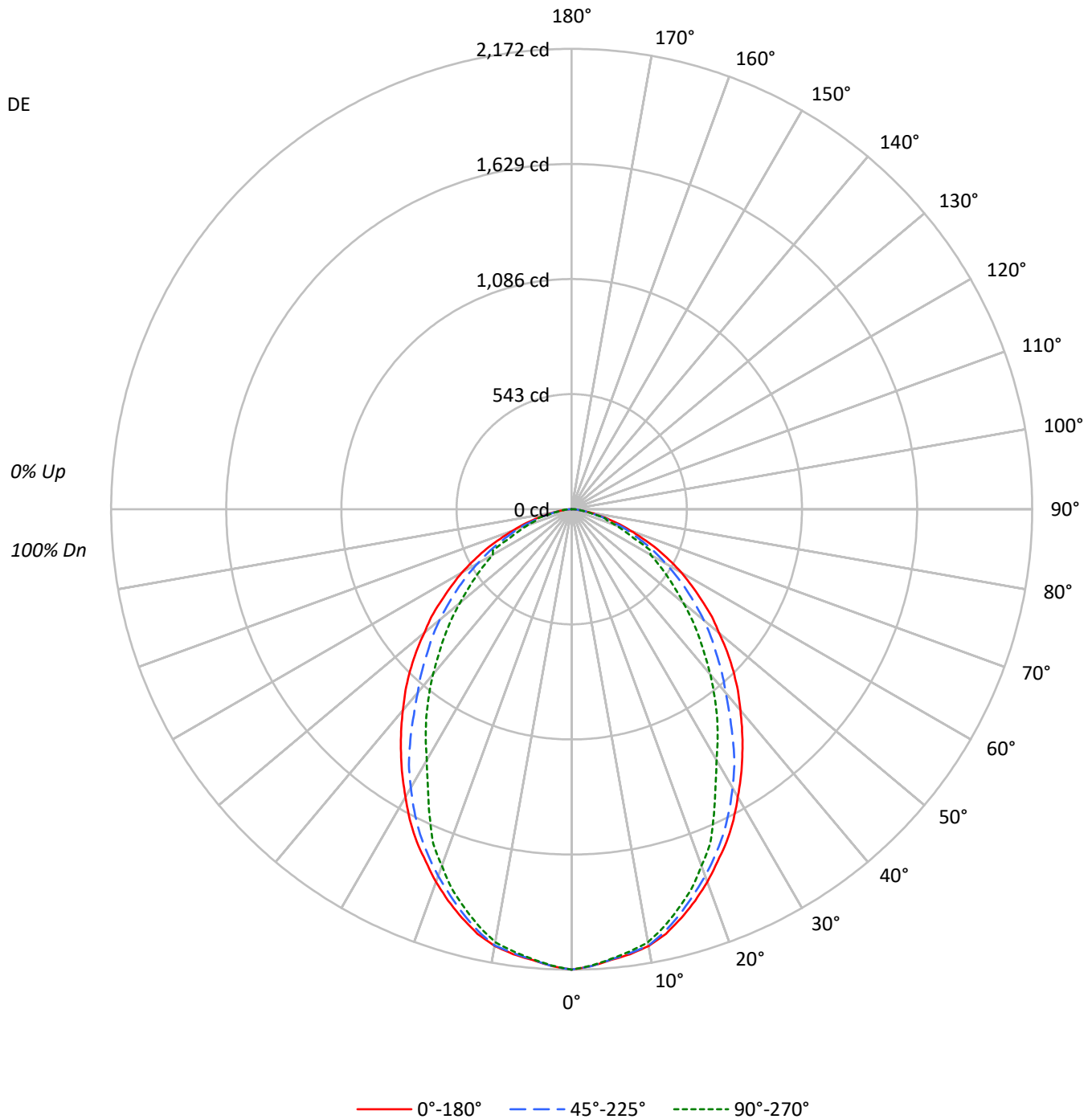
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2922	2922	2922
5°	2883	2879	2876
10°	2858	2854	2834
15°	2781	2753	2714
20°	2679	2635	2564
25°	2568	2513	2356
30°	2434	2356	2122
35°	2306	2178	1963
40°	2174	1985	1786
45°	2050	1835	1615
50°	1897	1703	1440
55°	1755	1543	1290
60°	1608	1378	1156
65°	1415	1207	1023
70°	1166	1057	869
75°	927	809	848
80°	623	583	545
85°	387	465	543

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2050 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.2	4.7
10°-20°	554.9	13.0
20°-30°	768.2	18.0
30°-40°	819.1	19.2
40°-50°	747.3	17.5
50°-60°	585.4	13.7
60°-70°	381.6	8.9
70°-80°	169.0	4.0
80°-90°	36.3	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°	1525.3	35.8
0°-40°	2344.4	55.0
0°-60°	3677.1	86.2
0°-90°	4264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2172	2172	2172	2172	2172	
5°	2134	2132	2132	2129	2129	203
15°	1996	1996	1976	1956	1948	561
25°	1730	1720	1692	1632	1587	794
35°	1404	1394	1326	1225	1195	878
45°	1077	1055	964	884	849	830
55°	748	726	658	580	550	671
65°	444	419	379	387	321	438
75°	178	166	156	148	163	191
85°	25	28	30	33	35	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2172.0	2172.0	2172.0	2172.0	2172.0
2.5°	2157.0	2157.0	2157.0	2154.4	2154.4
5°	2134.4	2131.8	2131.8	2129.3	2129.3
7.5°	2116.8	2114.3	2111.8	2109.2	2104.2
10°	2091.7	2091.7	2089.2	2076.6	2074.1
12.5°	2051.5	2049.0	2038.9	2021.4	2016.3
15°	1996.3	1996.3	1976.2	1956.1	1948.5
17.5°	1936.0	1933.5	1908.4	1888.3	1878.2
20°	1870.7	1865.7	1840.6	1807.9	1790.4
22.5°	1797.9	1797.9	1767.8	1725.1	1707.5
25°	1730.1	1720.0	1692.4	1632.2	1587.0
27.5°	1652.2	1637.2	1607.0	1521.7	1468.9
30°	1566.9	1559.3	1516.7	1406.2	1366.0
32.5°	1486.5	1474.0	1428.8	1313.3	1280.6
35°	1403.7	1393.6	1325.8	1225.4	1195.2
37.5°	1320.8	1308.2	1222.9	1142.5	1104.8
40°	1237.9	1222.9	1130.0	1057.1	1017.0
42.5°	1160.1	1140.0	1049.6	971.8	926.6
45°	1077.2	1054.6	964.2	883.9	848.7
47.5°	994.4	974.3	891.4	808.5	768.4
50°	906.5	888.9	813.6	730.7	688.0
52.5°	833.7	806.0	733.2	650.4	615.2
55°	748.3	725.7	657.9	580.0	549.9
57.5°	670.4	647.8	585.1	512.2	487.1
60°	597.6	565.0	512.2	449.5	429.4
62.5°	517.3	492.2	447.0	394.2	419.3
65°	444.4	419.3	379.2	386.7	321.4
67.5°	364.1	351.5	316.4	281.2	271.2
70°	296.3	281.2	268.7	231.0	221.0
72.5°	236.0	221.0	203.4	183.3	175.8
75°	178.3	165.7	155.7	148.1	163.2
77.5°	123.0	118.0	110.5	103.0	100.4
80°	80.4	77.8	75.3	72.8	70.3
82.5°	47.7	47.7	47.7	47.7	47.7
85°	25.1	27.6	30.1	32.6	35.2
87.5°	15.1	15.1	17.6	20.1	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)