

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: P561972

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561972
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-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3881.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

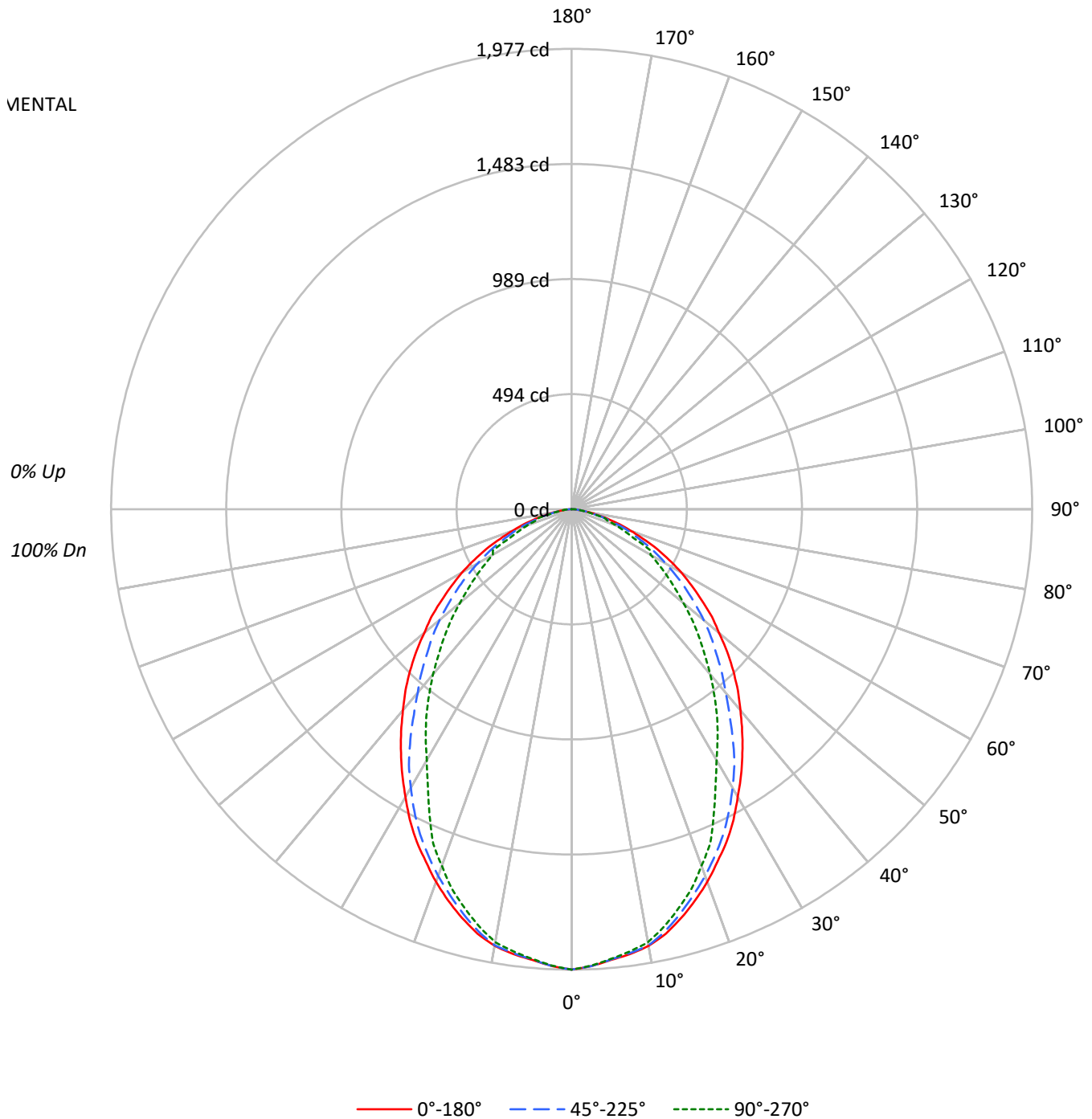
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2660	2660	2660
5°	2624	2621	2618
10°	2601	2598	2579
15°	2531	2506	2470
20°	2438	2399	2333
25°	2338	2287	2144
30°	2216	2145	1932
35°	2099	1982	1787
40°	1979	1806	1626
45°	1866	1670	1470
50°	1727	1550	1311
55°	1598	1405	1174
60°	1464	1255	1052
65°	1288	1099	931
70°	1061	962	791
75°	844	737	773
80°	566	532	496
85°	354	423	494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1866 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.0	4.7
10°-20°	505.0	13.0
20°-30°	699.2	18.0
30°-40°	745.5	19.2
40°-50°	680.2	17.5
50°-60°	532.8	13.7
60°-70°	347.3	8.9
70°-80°	153.9	4.0
80°-90°	33.0	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°	1388.3	35.8
0°-40°	2133.8	55.0
0°-60°	3346.8	86.2
0°-90°	3881.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3881.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1977	1977	1977	1977	1977	
5°	1943	1940	1940	1938	1938	184
15°	1817	1817	1799	1780	1774	511
25°	1575	1566	1540	1486	1444	723
35°	1278	1268	1207	1115	1088	799
45°	980	960	878	804	772	755
55°	681	660	599	528	500	611
65°	404	382	345	352	292	399
75°	162	151	142	135	149	174
85°	23	25	27	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1976.9	1976.9	1976.9	1976.9	1976.9
2.5°	1963.2	1963.2	1963.2	1960.9	1960.9
5°	1942.6	1940.4	1940.4	1938.1	1938.1
7.5°	1926.6	1924.4	1922.1	1919.8	1915.2
10°	1903.8	1903.8	1901.5	1890.1	1887.8
12.5°	1867.2	1864.9	1855.8	1839.8	1835.2
15°	1816.9	1816.9	1798.7	1780.4	1773.5
17.5°	1762.1	1759.8	1737.0	1718.7	1709.5
20°	1702.7	1698.1	1675.2	1645.5	1629.5
22.5°	1636.4	1636.4	1609.0	1570.1	1554.1
25°	1574.7	1565.5	1540.4	1485.6	1444.4
27.5°	1503.8	1490.1	1462.7	1385.0	1337.0
30°	1426.1	1419.3	1380.4	1279.9	1243.3
32.5°	1353.0	1341.6	1300.4	1195.3	1165.6
35°	1277.6	1268.4	1206.7	1115.3	1087.9
37.5°	1202.2	1190.7	1113.0	1039.9	1005.6
40°	1126.7	1113.0	1028.5	962.2	925.6
42.5°	1055.9	1037.6	955.3	884.5	843.3
45°	980.5	959.9	877.6	804.5	772.5
47.5°	905.0	886.8	811.3	735.9	699.4
50°	825.1	809.1	740.5	665.1	626.2
52.5°	758.8	733.6	667.4	591.9	559.9
55°	681.1	660.5	598.8	527.9	500.5
57.5°	610.2	589.7	532.5	466.2	443.4
60°	543.9	514.2	466.2	409.1	390.8
62.5°	470.8	448.0	406.8	358.8	381.7
65°	404.5	381.7	345.1	352.0	292.5
67.5°	331.4	320.0	288.0	256.0	246.8
70°	269.7	256.0	244.5	210.3	201.1
72.5°	214.8	201.1	185.1	166.8	160.0
75°	162.3	150.8	141.7	134.8	148.6
77.5°	112.0	107.4	100.6	93.7	91.4
80°	73.1	70.8	68.6	66.3	64.0
82.5°	43.4	43.4	43.4	43.4	43.4
85°	22.9	25.1	27.4	29.7	32.0
87.5°	13.7	13.7	16.0	18.3	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)