

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: P561994

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561994
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-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3814.0 lumens
Efficiency: N/A
Efficacy: 88.3 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

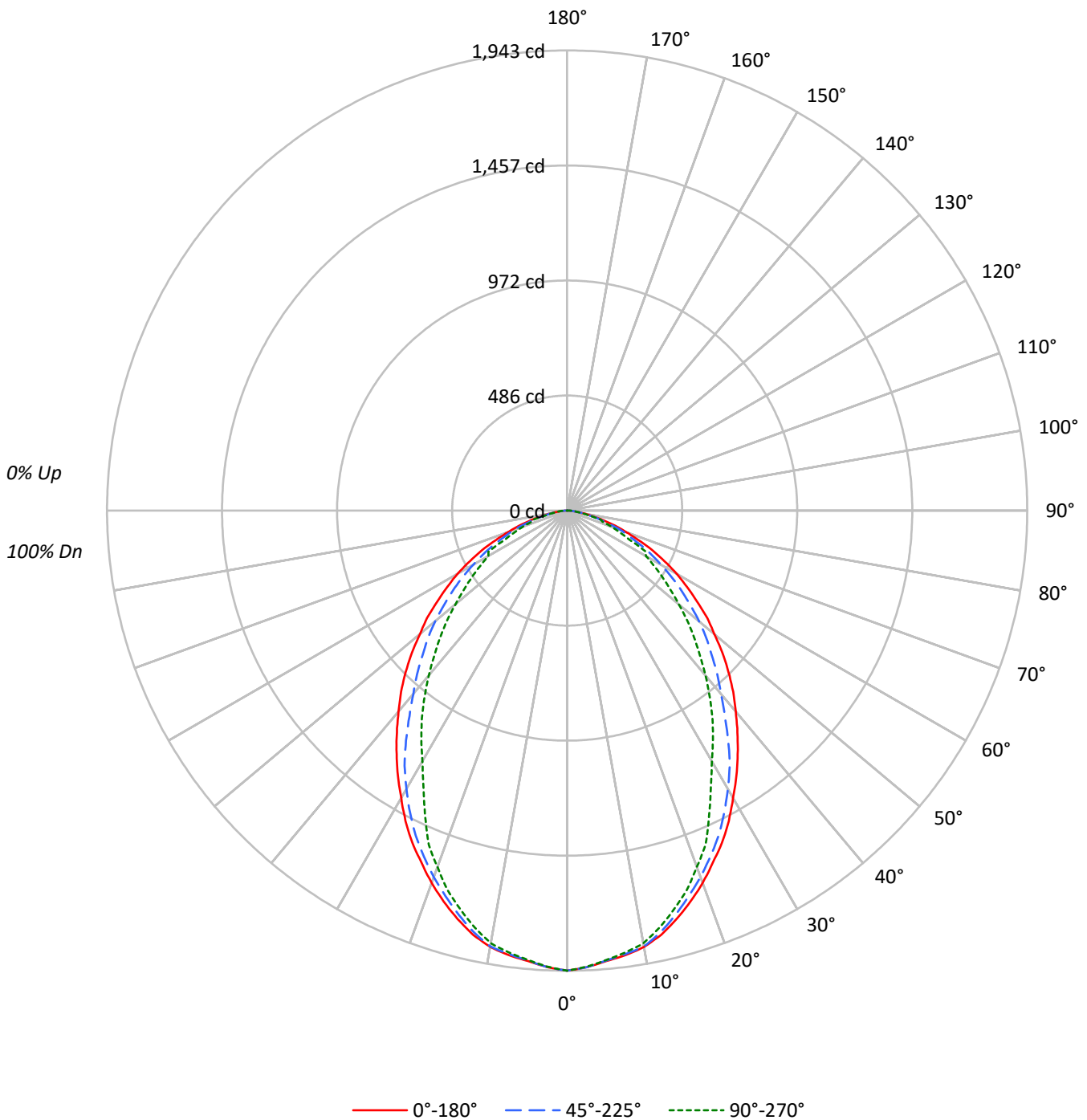
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561994

CATALOG NUMBER: FSR-24-4-LD4-1HI-35-UNV-81-94-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561994

CATALOG NUMBER: FSR-24-4-LD4-1HI-35-UNV-81-94-EDD-90

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°	2614	2614	2614
5°	2578	2576	2572
10°	2556	2553	2535
15°	2487	2462	2428
20°	2396	2357	2293
25°	2297	2247	2107
30°	2177	2108	1898
35°	2062	1948	1756
40°	1945	1775	1598
45°	1833	1641	1445
50°	1697	1523	1288
55°	1570	1380	1154
60°	1439	1233	1034
65°	1266	1080	915
70°	1042	945	777
75°	829	724	759
80°	557	522	487
85°	347	417	485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1833 cd/sqm



TEST NUMBER: P561994

CATALOG NUMBER: FSR-24-4-LD4-1HI-35-UNV-81-94-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.8	4.7
10°-20°	496.3	13.0
20°-30°	687.1	18.0
30°-40°	732.7	19.2
40°-50°	668.4	17.5
50°-60°	523.7	13.7
60°-70°	341.3	8.9
70°-80°	151.2	4.0
80°-90°	32.5	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°	1364.3	35.8
0°-40°	2097.0	55.0
0°-60°	3289.0	86.2
0°-90°	3814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1943	1943	1943	1943	1943	
5°	1909	1907	1907	1905	1905	181
15°	1786	1786	1768	1750	1743	502
25°	1548	1538	1514	1460	1420	710
35°	1256	1246	1186	1096	1069	785
45°	964	943	862	791	759	742
55°	669	649	588	519	492	600
65°	398	375	339	346	288	392
75°	160	148	139	132	146	171
85°	22	25	27	29	31	31
90°	0	0	0	0	0	



TEST NUMBER: P561994

CATALOG NUMBER: FSR-24-4-LD4-1HI-35-UNV-81-94-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1942.8	1942.8	1942.8	1942.8	1942.8
2.5°	1929.3	1929.3	1929.3	1927.1	1927.1
5°	1909.1	1906.9	1906.9	1904.6	1904.6
7.5°	1893.4	1891.1	1888.9	1886.7	1882.2
10°	1870.9	1870.9	1868.7	1857.5	1855.2
12.5°	1835.0	1832.7	1823.8	1808.0	1803.5
15°	1785.6	1785.6	1767.6	1749.6	1742.9
17.5°	1731.7	1729.4	1707.0	1689.0	1680.0
20°	1673.3	1668.8	1646.3	1617.1	1601.4
22.5°	1608.1	1608.1	1581.2	1543.0	1527.3
25°	1547.5	1538.5	1513.8	1459.9	1419.5
27.5°	1477.9	1464.4	1437.4	1361.1	1313.9
30°	1401.5	1394.8	1356.6	1257.8	1221.8
32.5°	1329.6	1318.4	1278.0	1174.7	1145.5
35°	1255.5	1246.5	1185.9	1096.1	1069.1
37.5°	1181.4	1170.2	1093.8	1021.9	988.2
40°	1107.3	1093.8	1010.7	945.6	909.6
42.5°	1037.7	1019.7	938.8	869.2	828.8
45°	963.5	943.3	862.5	790.6	759.2
47.5°	889.4	871.5	797.3	723.2	687.3
50°	810.8	795.1	727.7	653.6	615.4
52.5°	745.7	721.0	655.8	581.7	550.3
55°	669.3	649.1	588.5	518.8	491.9
57.5°	599.7	579.5	523.3	458.2	435.7
60°	534.6	505.4	458.2	402.0	384.1
62.5°	462.7	440.2	399.8	352.6	375.1
65°	397.5	375.1	339.1	345.9	287.5
67.5°	325.7	314.4	283.0	251.6	242.6
70°	265.0	251.6	240.3	206.6	197.6
72.5°	211.1	197.6	181.9	164.0	157.2
75°	159.5	148.2	139.3	132.5	146.0
77.5°	110.1	105.6	98.8	92.1	89.8
80°	71.9	69.6	67.4	65.1	62.9
82.5°	42.7	42.7	42.7	42.7	42.7
85°	22.5	24.7	27.0	29.2	31.4
87.5°	13.5	13.5	15.7	18.0	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)