

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: P561750

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561750
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-LD4-2STD-35-UNV-82-87-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4847.0 lumens
Efficiency: N/A
Efficacy: 72.8 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

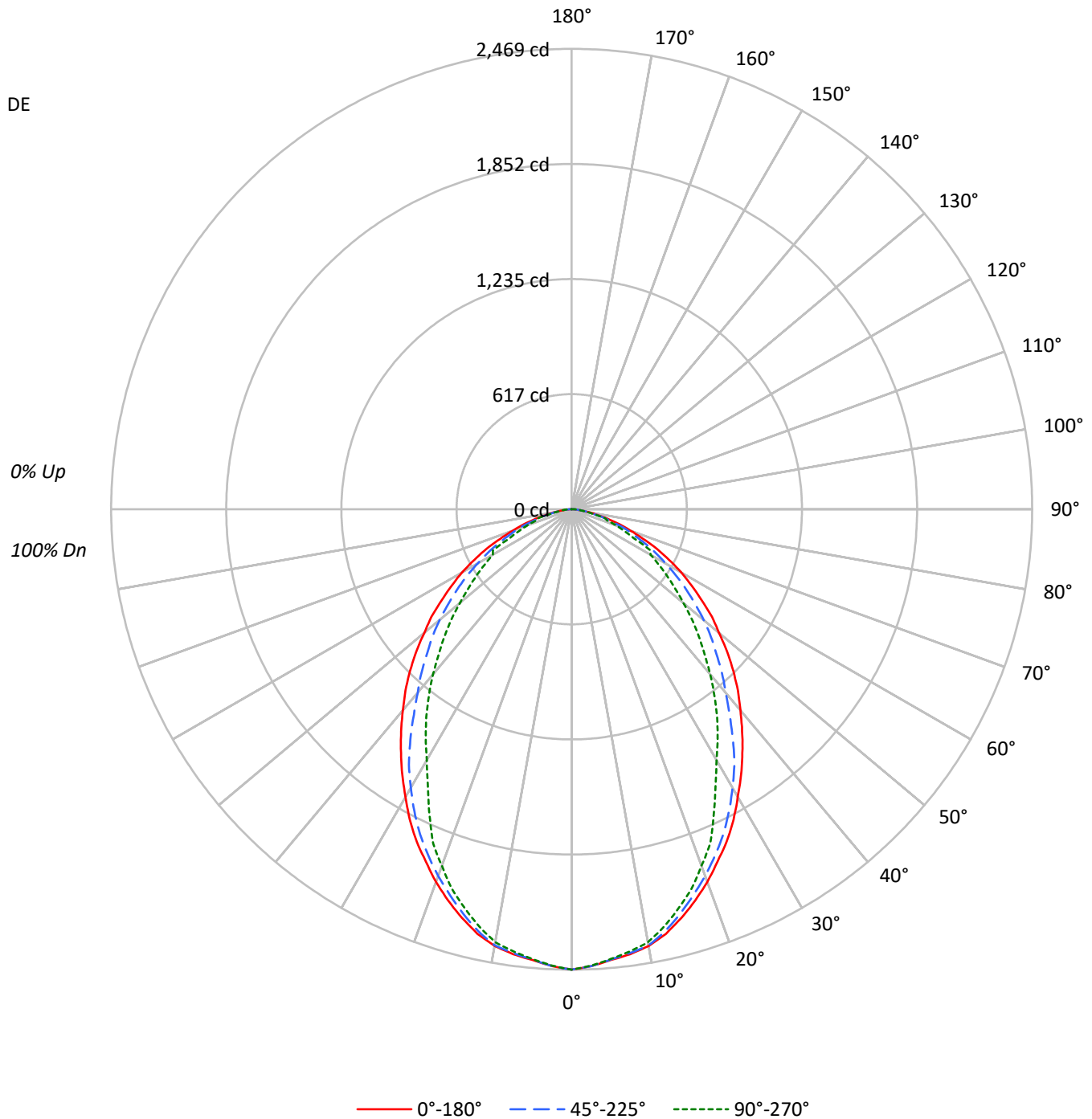
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561750

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561750

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-87-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°	6644	6644	6644
5°	6554	6546	6538
10°	6497	6489	6442
15°	6322	6258	6171
20°	6090	5991	5828
25°	5839	5712	5356
30°	5534	5357	4825
35°	5242	4951	4463
40°	4943	4512	4061
45°	4660	4171	3672
50°	4314	3872	3274
55°	3991	3508	2933
60°	3656	3134	2627
65°	3217	2744	2327
70°	2650	2403	1976
75°	2108	1840	1929
80°	1415	1327	1238
85°	880	1059	1235

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4660 cd/sqm



TEST NUMBER: P561750

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.8	4.7
10°-20°	630.7	13.0
20°-30°	873.2	18.0
30°-40°	931.1	19.2
40°-50°	849.5	17.5
50°-60°	665.5	13.7
60°-70°	433.7	8.9
70°-80°	192.2	4.0
80°-90°	41.2	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°	1733.8	35.8
0°-40°	2664.9	55.0
0°-60°	4179.9	86.2
0°-90°	4847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4847.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2469	2469	2469	2469	2469	
5°	2426	2423	2423	2420	2420	230
15°	2269	2269	2246	2224	2215	638
25°	1967	1955	1924	1855	1804	903
35°	1596	1584	1507	1393	1359	998
45°	1224	1199	1096	1005	965	943
55°	851	825	748	659	625	763
65°	505	477	431	440	365	498
75°	203	188	177	168	186	217
85°	28	31	34	37	40	40
90°	0	0	0	0	0	



TEST NUMBER: P561750

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2469.0	2469.0	2469.0	2469.0	2469.0
2.5°	2451.9	2451.9	2451.9	2449.0	2449.0
5°	2426.2	2423.3	2423.3	2420.5	2420.5
7.5°	2406.2	2403.3	2400.5	2397.6	2391.9
10°	2377.7	2377.7	2374.8	2360.5	2357.7
12.5°	2332.0	2329.1	2317.7	2297.7	2292.0
15°	2269.2	2269.2	2246.4	2223.5	2215.0
17.5°	2200.7	2197.8	2169.3	2146.5	2135.0
20°	2126.5	2120.8	2092.2	2055.1	2035.1
22.5°	2043.7	2043.7	2009.4	1960.9	1940.9
25°	1966.6	1955.2	1923.8	1855.3	1803.9
27.5°	1878.2	1861.0	1826.8	1729.7	1669.8
30°	1781.1	1772.5	1724.0	1598.4	1552.8
32.5°	1689.8	1675.5	1624.1	1492.8	1455.7
35°	1595.6	1584.2	1507.1	1392.9	1358.7
37.5°	1501.4	1487.1	1390.1	1298.7	1255.9
40°	1407.2	1390.1	1284.4	1201.7	1156.0
42.5°	1318.7	1295.9	1193.1	1104.6	1053.2
45°	1224.5	1198.8	1096.1	1004.7	964.8
47.5°	1130.3	1107.5	1013.3	919.1	873.4
50°	1030.4	1010.4	924.8	830.6	782.1
52.5°	947.6	916.2	833.5	739.3	699.3
55°	850.6	824.9	747.8	659.4	625.1
57.5°	762.1	736.4	665.1	582.3	553.7
60°	679.3	642.2	582.3	510.9	488.1
62.5°	588.0	559.4	508.1	448.1	476.7
65°	505.2	476.7	431.0	439.6	365.4
67.5°	413.9	399.6	359.6	319.7	308.3
70°	336.8	319.7	305.4	262.6	251.2
72.5°	268.3	251.2	231.2	208.4	199.8
75°	202.7	188.4	177.0	168.4	185.5
77.5°	139.9	134.2	125.6	117.0	114.2
80°	91.3	88.5	85.6	82.8	79.9
82.5°	54.2	54.2	54.2	54.2	54.2
85°	28.5	31.4	34.3	37.1	40.0
87.5°	17.1	17.1	20.0	22.8	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)