

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: P561753

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561753
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-82-88-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5216.0 lumens
Efficiency: N/A
Efficacy: 78.3 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

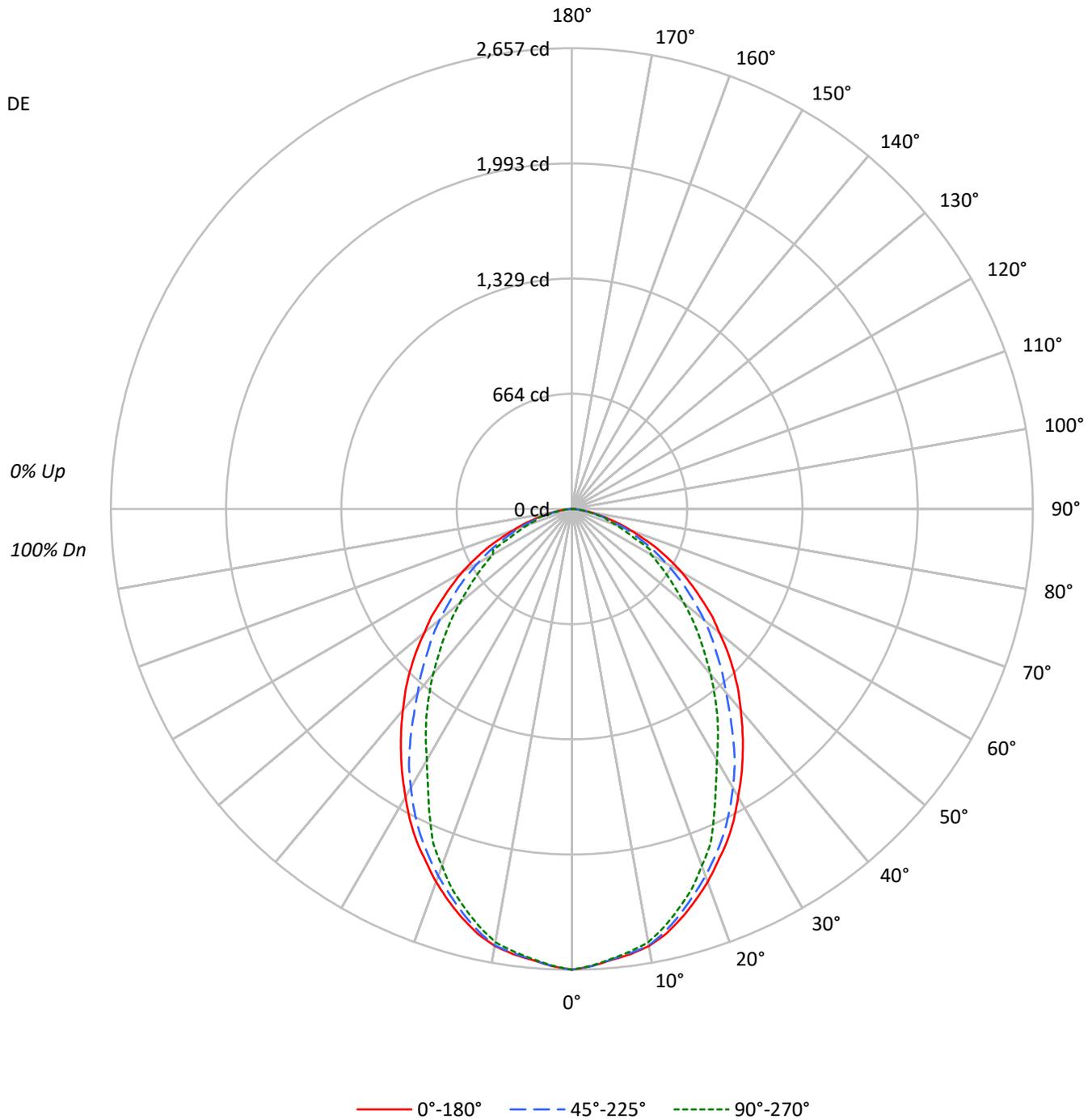
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561753

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561753

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-88-EDD

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	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				
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°	7150	7150	7150
5°	7053	7044	7036
10°	6992	6983	6933
15°	6803	6735	6640
20°	6553	6448	6272
25°	6284	6147	5764
30°	5956	5765	5192
35°	5640	5328	4803
40°	5319	4855	4370
45°	5015	4489	3951
50°	4642	4166	3523
55°	4294	3776	3156
60°	3934	3372	2827
65°	3462	2953	2504
70°	2852	2586	2127
75°	2268	1980	2076
80°	1523	1427	1333
85°	948	1139	1328

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5015 cd/sqm



TEST NUMBER: P561753

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.3	4.7
10°-20°	678.8	13.0
20°-30°	939.7	18.0
30°-40°	1002.0	19.2
40°-50°	914.1	17.5
50°-60°	716.1	13.7
60°-70°	466.7	8.9
70°-80°	206.8	4.0
80°-90°	44.4	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°	1865.8	35.8
0°-40°	2867.8	55.0
0°-60°	4498.1	86.2
0°-90°	5216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5216.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2657	2657	2657	2657	2657	
5°	2611	2608	2608	2605	2605	248
15°	2442	2442	2417	2393	2384	686
25°	2116	2104	2070	1997	1941	972
35°	1717	1705	1622	1499	1462	1073
45°	1318	1290	1180	1081	1038	1015
55°	915	888	805	710	673	821
65°	544	513	464	473	393	536
75°	218	203	190	181	200	234
85°	31	34	37	40	43	43
90°	0	0	0	0	0	



TEST NUMBER: P561753

CATALOG NUMBER: FSR-12-4-LD4-2STD-35-UNV-82-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2657.0	2657.0	2657.0	2657.0	2657.0
2.5°	2638.5	2638.5	2638.5	2635.5	2635.5
5°	2610.9	2607.8	2607.8	2604.7	2604.7
7.5°	2589.4	2586.3	2583.2	2580.2	2574.0
10°	2558.7	2558.7	2555.6	2540.2	2537.2
12.5°	2509.5	2506.5	2494.2	2472.7	2466.5
15°	2441.9	2441.9	2417.4	2392.8	2383.6
17.5°	2368.2	2365.2	2334.4	2309.9	2297.6
20°	2288.4	2282.2	2251.5	2211.6	2190.1
22.5°	2199.3	2199.3	2162.4	2110.2	2088.7
25°	2116.4	2104.1	2070.3	1996.6	1941.3
27.5°	2021.1	2002.7	1965.8	1861.4	1796.9
30°	1916.7	1907.5	1855.3	1720.1	1671.0
32.5°	1818.4	1803.0	1747.8	1606.5	1566.5
35°	1717.0	1704.8	1621.8	1499.0	1462.1
37.5°	1615.7	1600.3	1495.9	1397.6	1351.5
40°	1514.3	1495.9	1382.2	1293.2	1244.0
42.5°	1419.1	1394.5	1283.9	1188.7	1133.4
45°	1317.7	1290.1	1179.5	1081.2	1038.2
47.5°	1216.4	1191.8	1090.4	989.1	939.9
50°	1108.9	1087.4	995.2	893.8	841.6
52.5°	1019.8	986.0	896.9	795.6	752.5
55°	915.3	887.7	804.8	709.5	672.7
57.5°	820.1	792.5	715.7	626.6	595.9
60°	731.0	691.1	626.6	549.8	525.2
62.5°	632.8	602.0	546.8	482.2	513.0
65°	543.7	513.0	463.8	473.0	393.2
67.5°	445.4	430.0	387.0	344.0	331.7
70°	362.5	344.0	328.7	282.6	270.3
72.5°	288.7	270.3	248.8	224.2	215.0
75°	218.1	202.7	190.4	181.2	199.7
77.5°	150.5	144.4	135.2	125.9	122.9
80°	98.3	95.2	92.1	89.1	86.0
82.5°	58.4	58.4	58.4	58.4	58.4
85°	30.7	33.8	36.9	39.9	43.0
87.5°	18.4	18.4	21.5	24.6	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)