

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: P560789

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560789
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-LD4-1HI-35-UNV-82-86-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3672.0 lumens
Efficiency: N/A
Efficacy: 85.0 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

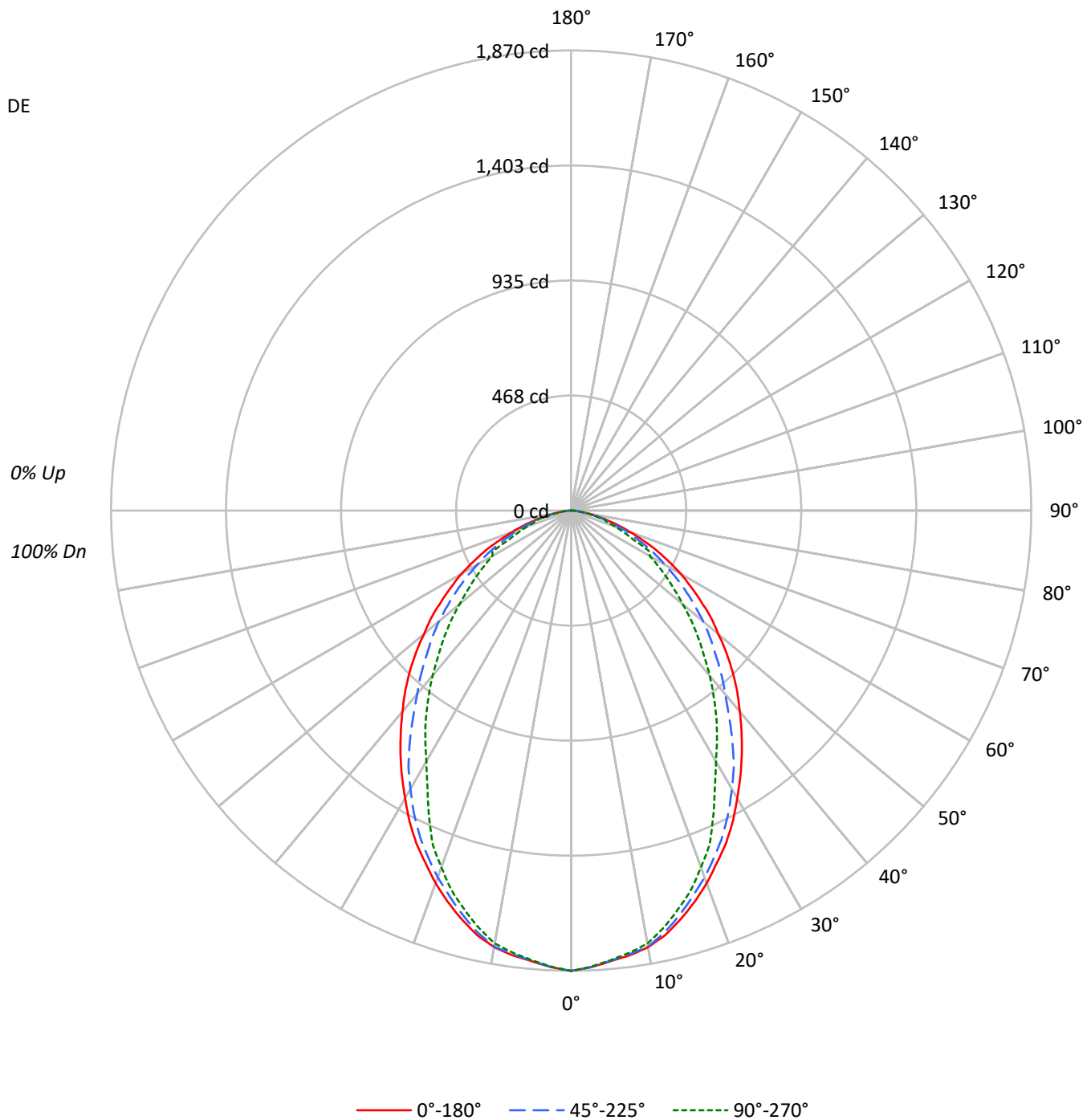
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5033	5033	5033
5°	4965	4959	4953
10°	4922	4916	4881
15°	4789	4741	4675
20°	4613	4539	4415
25°	4424	4328	4058
30°	4193	4058	3655
35°	3971	3751	3381
40°	3745	3418	3077
45°	3530	3160	2782
50°	3268	2933	2480
55°	3023	2658	2222
60°	2770	2374	1990
65°	2437	2079	1762
70°	2008	1821	1497
75°	1596	1394	1462
80°	1072	1006	938
85°	667	800	936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3530 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.1	4.7
10°-20°	477.8	13.0
20°-30°	661.5	18.0
30°-40°	705.4	19.2
40°-50°	643.5	17.5
50°-60°	504.1	13.7
60°-70°	328.6	8.9
70°-80°	145.6	4.0
80°-90°	31.3	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°	1313.5	35.8
0°-40°	2018.9	55.0
0°-60°	3166.6	86.2
0°-90°	3672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3672.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1870	1870	1870	1870	1870	
5°	1838	1836	1836	1834	1834	174
15°	1719	1719	1702	1684	1678	483
25°	1490	1481	1458	1406	1367	684
35°	1209	1200	1142	1055	1029	756
45°	928	908	830	761	731	715
55°	644	625	566	500	474	578
65°	383	361	326	333	277	377
75°	154	143	134	128	141	165
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1870.5	1870.5	1870.5	1870.5	1870.5
2.5°	1857.5	1857.5	1857.5	1855.3	1855.3
5°	1838.0	1835.9	1835.9	1833.7	1833.7
7.5°	1822.9	1820.7	1818.6	1816.4	1812.1
10°	1801.3	1801.3	1799.1	1788.3	1786.1
12.5°	1766.7	1764.5	1755.9	1740.7	1736.4
15°	1719.1	1719.1	1701.8	1684.5	1678.0
17.5°	1667.2	1665.0	1643.4	1626.1	1617.5
20°	1611.0	1606.7	1585.0	1556.9	1541.8
22.5°	1548.3	1548.3	1522.3	1485.6	1470.4
25°	1489.9	1481.2	1457.5	1405.6	1366.6
27.5°	1422.9	1409.9	1383.9	1310.4	1265.0
30°	1349.3	1342.8	1306.1	1210.9	1176.3
32.5°	1280.1	1269.3	1230.4	1130.9	1102.8
35°	1208.8	1200.1	1141.7	1055.2	1029.3
37.5°	1137.4	1126.6	1053.1	983.9	951.5
40°	1066.1	1053.1	973.1	910.4	875.8
42.5°	999.0	981.7	903.9	836.8	797.9
45°	927.7	908.2	830.4	761.2	730.9
47.5°	856.3	839.0	767.6	696.3	661.7
50°	780.6	765.5	700.6	629.3	592.5
52.5°	717.9	694.1	631.4	560.1	529.8
55°	644.4	624.9	566.5	499.5	473.6
57.5°	577.4	557.9	503.8	441.1	419.5
60°	514.6	486.5	441.1	387.1	369.8
62.5°	445.5	423.8	384.9	339.5	361.1
65°	382.7	361.1	326.5	333.0	276.8
67.5°	313.5	302.7	272.5	242.2	233.5
70°	255.2	242.2	231.4	198.9	190.3
72.5°	203.3	190.3	175.2	157.9	151.4
75°	153.5	142.7	134.1	127.6	140.6
77.5°	106.0	101.6	95.1	88.7	86.5
80°	69.2	67.0	64.9	62.7	60.5
82.5°	41.1	41.1	41.1	41.1	41.1
85°	21.6	23.8	25.9	28.1	30.3
87.5°	13.0	13.0	15.1	17.3	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)