

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: P562385

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562385
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-LD4-1STD-40-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3665.0 lumens
Efficiency: N/A
Efficacy: 110.1 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

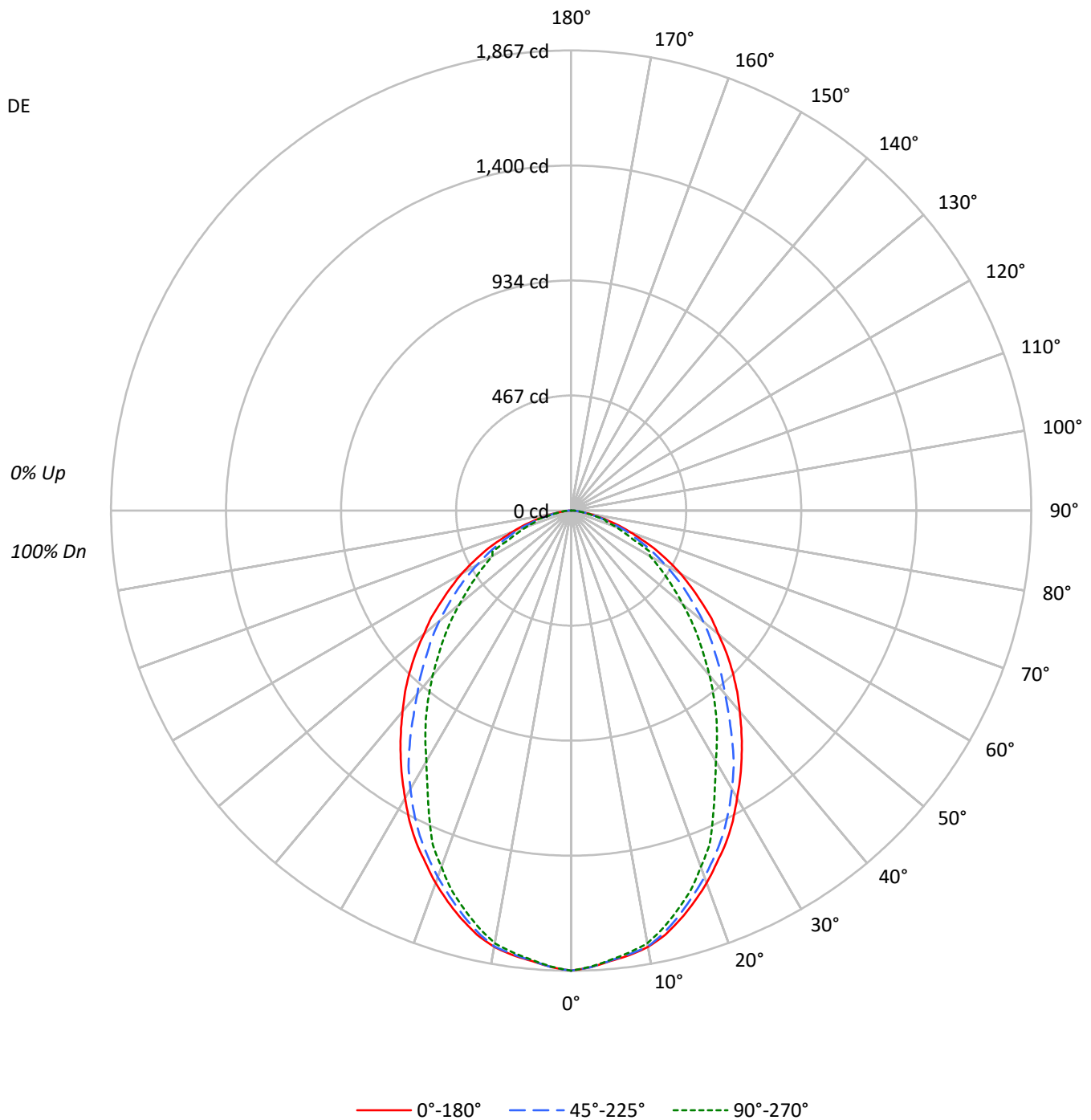
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	2512	2512	2512
5°	2478	2475	2472
10°	2456	2453	2436
15°	2390	2366	2333
20°	2302	2265	2203
25°	2208	2160	2025
30°	2092	2025	1824
35°	1982	1872	1687
40°	1869	1706	1535
45°	1762	1577	1388
50°	1631	1464	1238
55°	1509	1327	1109
60°	1382	1185	993
65°	1216	1038	880
70°	1002	908	747
75°	796	696	729
80°	535	501	468
85°	333	400	466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1762 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.8	4.7
10°-20°	476.9	13.0
20°-30°	660.3	18.0
30°-40°	704.1	19.2
40°-50°	642.3	17.5
50°-60°	503.2	13.7
60°-70°	328.0	8.9
70°-80°	145.3	4.0
80°-90°	31.2	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°	1311.0	35.8
0°-40°	2015.1	55.0
0°-60°	3160.6	86.2
0°-90°	3665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3665.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1867	1867	1867	1867	1867	
5°	1834	1832	1832	1830	1830	174
15°	1716	1716	1699	1681	1675	482
25°	1487	1478	1455	1403	1364	683
35°	1206	1198	1140	1053	1027	754
45°	926	906	829	760	730	713
55°	643	624	566	499	473	577
65°	382	360	326	332	276	376
75°	153	142	134	127	140	164
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°	1866.9	1866.9	1866.9	1866.9	1866.9
2.5°	1854.0	1854.0	1854.0	1851.8	1851.8
5°	1834.5	1832.4	1832.4	1830.2	1830.2
7.5°	1819.4	1817.3	1815.1	1812.9	1808.6
10°	1797.8	1797.8	1795.7	1784.9	1782.7
12.5°	1763.3	1761.1	1752.5	1737.4	1733.1
15°	1715.8	1715.8	1698.6	1681.3	1674.8
17.5°	1664.0	1661.9	1640.3	1623.0	1614.4
20°	1607.9	1603.6	1582.0	1554.0	1538.8
22.5°	1545.3	1545.3	1519.4	1482.7	1467.6
25°	1487.0	1478.4	1454.7	1402.9	1364.0
27.5°	1420.1	1407.2	1381.3	1307.9	1262.6
30°	1346.8	1340.3	1303.6	1208.6	1174.1
32.5°	1277.7	1266.9	1228.1	1128.8	1100.7
35°	1206.5	1197.8	1139.6	1053.2	1027.3
37.5°	1135.2	1124.5	1051.1	982.0	949.6
40°	1064.0	1051.1	971.2	908.6	874.1
42.5°	997.1	979.9	902.2	835.2	796.4
45°	925.9	906.5	828.8	759.7	729.5
47.5°	854.7	837.4	766.2	695.0	660.4
50°	779.1	764.0	699.3	628.1	591.4
52.5°	716.5	692.8	630.2	559.0	528.8
55°	643.2	623.7	565.5	498.6	472.7
57.5°	576.3	556.8	502.9	440.3	418.7
60°	513.7	485.6	440.3	386.3	369.1
62.5°	444.6	423.0	384.2	338.8	360.4
65°	382.0	360.4	325.9	332.4	276.3
67.5°	312.9	302.2	271.9	241.7	233.1
70°	254.7	241.7	230.9	198.6	189.9
72.5°	202.9	189.9	174.8	157.6	151.1
75°	153.2	142.4	133.8	127.3	140.3
77.5°	105.8	101.4	95.0	88.5	86.3
80°	69.1	66.9	64.7	62.6	60.4
82.5°	41.0	41.0	41.0	41.0	41.0
85°	21.6	23.7	25.9	28.1	30.2
87.5°	12.9	12.9	15.1	17.3	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)