

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: P562451

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562451
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-50-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3654.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

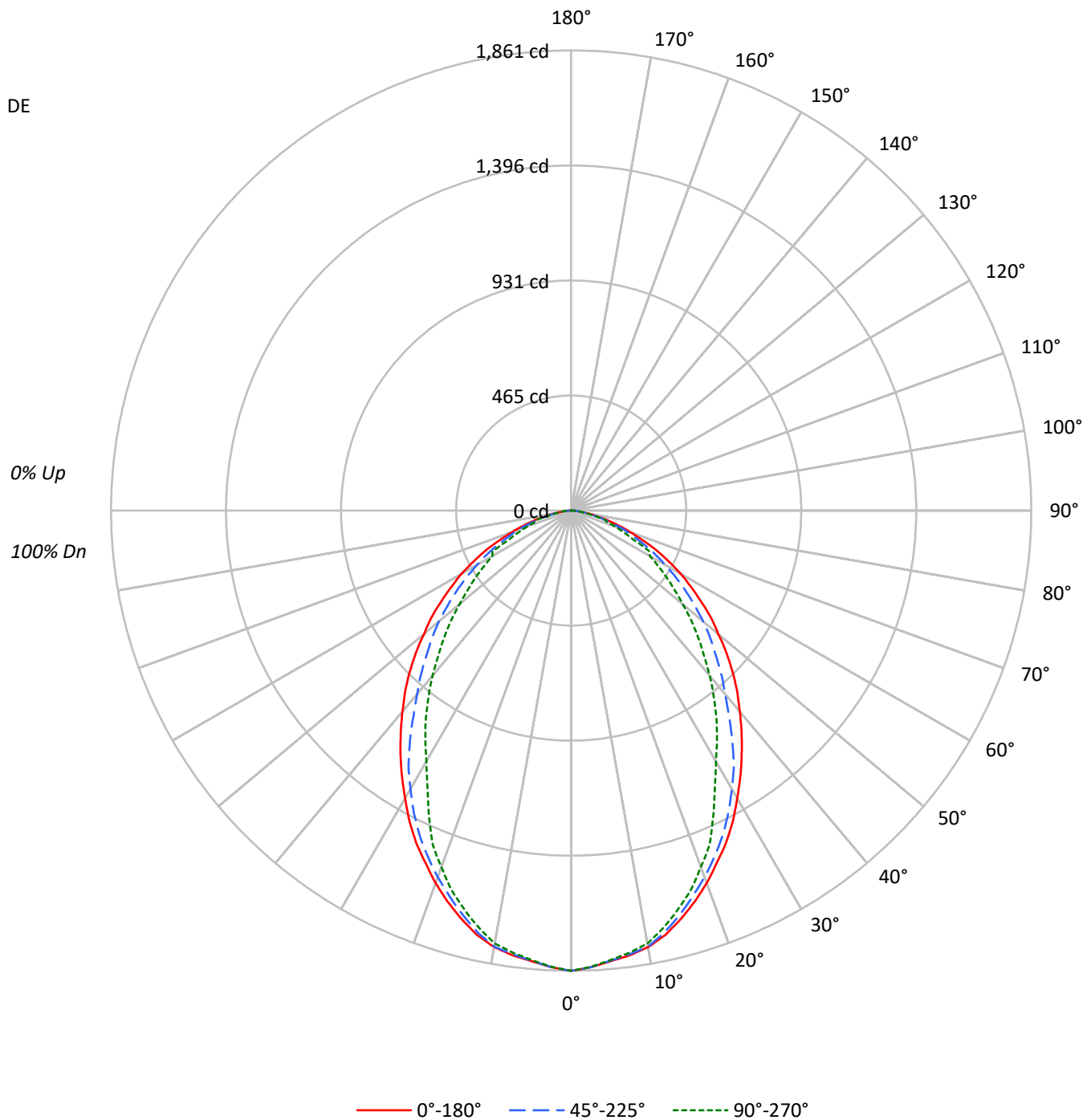
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	2504	2504	2504
5°	2470	2467	2464
10°	2449	2446	2428
15°	2383	2359	2326
20°	2295	2258	2197
25°	2201	2153	2019
30°	2086	2019	1819
35°	1976	1866	1682
40°	1863	1701	1531
45°	1756	1572	1384
50°	1626	1459	1234
55°	1504	1323	1105
60°	1378	1181	990
65°	1213	1034	877
70°	999	906	745
75°	794	693	727
80°	534	501	467
85°	332	398	465

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1756 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.3	4.7
10°-20°	475.5	13.0
20°-30°	658.3	18.0
30°-40°	701.9	19.2
40°-50°	640.4	17.5
50°-60°	501.7	13.7
60°-70°	327.0	8.9
70°-80°	144.9	4.0
80°-90°	31.1	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°	1307.1	35.8
0°-40°	2009.0	55.0
0°-60°	3151.1	86.2
0°-90°	3654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1861	1861	1861	1861	1861	
5°	1829	1827	1827	1825	1825	174
15°	1711	1711	1694	1676	1670	481
25°	1483	1474	1450	1399	1360	681
35°	1203	1194	1136	1050	1024	752
45°	923	904	826	757	727	711
55°	641	622	564	497	471	575
65°	381	359	325	331	275	375
75°	153	142	133	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°	1861.3	1861.3	1861.3	1861.3	1861.3
2.5°	1848.4	1848.4	1848.4	1846.2	1846.2
5°	1829.0	1826.9	1826.9	1824.7	1824.7
7.5°	1814.0	1811.8	1809.7	1807.5	1803.2
10°	1792.4	1792.4	1790.3	1779.5	1777.4
12.5°	1758.0	1755.9	1747.3	1732.2	1727.9
15°	1710.7	1710.7	1693.5	1676.2	1669.8
17.5°	1659.0	1656.9	1635.4	1618.1	1609.5
20°	1603.1	1598.8	1577.3	1549.3	1534.2
22.5°	1540.7	1540.7	1514.9	1478.3	1463.2
25°	1482.6	1474.0	1450.3	1398.7	1359.9
27.5°	1415.9	1403.0	1377.1	1304.0	1258.8
30°	1342.7	1336.3	1299.7	1205.0	1170.6
32.5°	1273.9	1263.1	1224.4	1125.4	1097.4
35°	1202.9	1194.2	1136.1	1050.1	1024.3
37.5°	1131.8	1121.1	1047.9	979.1	946.8
40°	1060.8	1047.9	968.3	905.9	871.5
42.5°	994.1	976.9	899.4	832.7	794.0
45°	923.1	903.8	826.3	757.4	727.3
47.5°	852.1	834.9	763.9	692.9	658.4
50°	776.8	761.7	697.2	626.2	589.6
52.5°	714.4	690.7	628.3	557.3	527.2
55°	641.2	621.9	563.8	497.1	471.2
57.5°	574.5	555.2	501.4	439.0	417.4
60°	512.1	484.2	439.0	385.2	368.0
62.5°	443.3	421.8	383.0	337.8	359.3
65°	380.9	359.3	324.9	331.4	275.4
67.5°	312.0	301.3	271.1	241.0	232.4
70°	253.9	241.0	230.2	198.0	189.4
72.5°	202.3	189.4	174.3	157.1	150.6
75°	152.8	142.0	133.4	127.0	139.9
77.5°	105.4	101.1	94.7	88.2	86.1
80°	68.9	66.7	64.6	62.4	60.3
82.5°	40.9	40.9	40.9	40.9	40.9
85°	21.5	23.7	25.8	28.0	30.1
87.5°	12.9	12.9	15.1	17.2	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)