

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: P562712

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562712
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-LD4-2LO-35-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3829.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

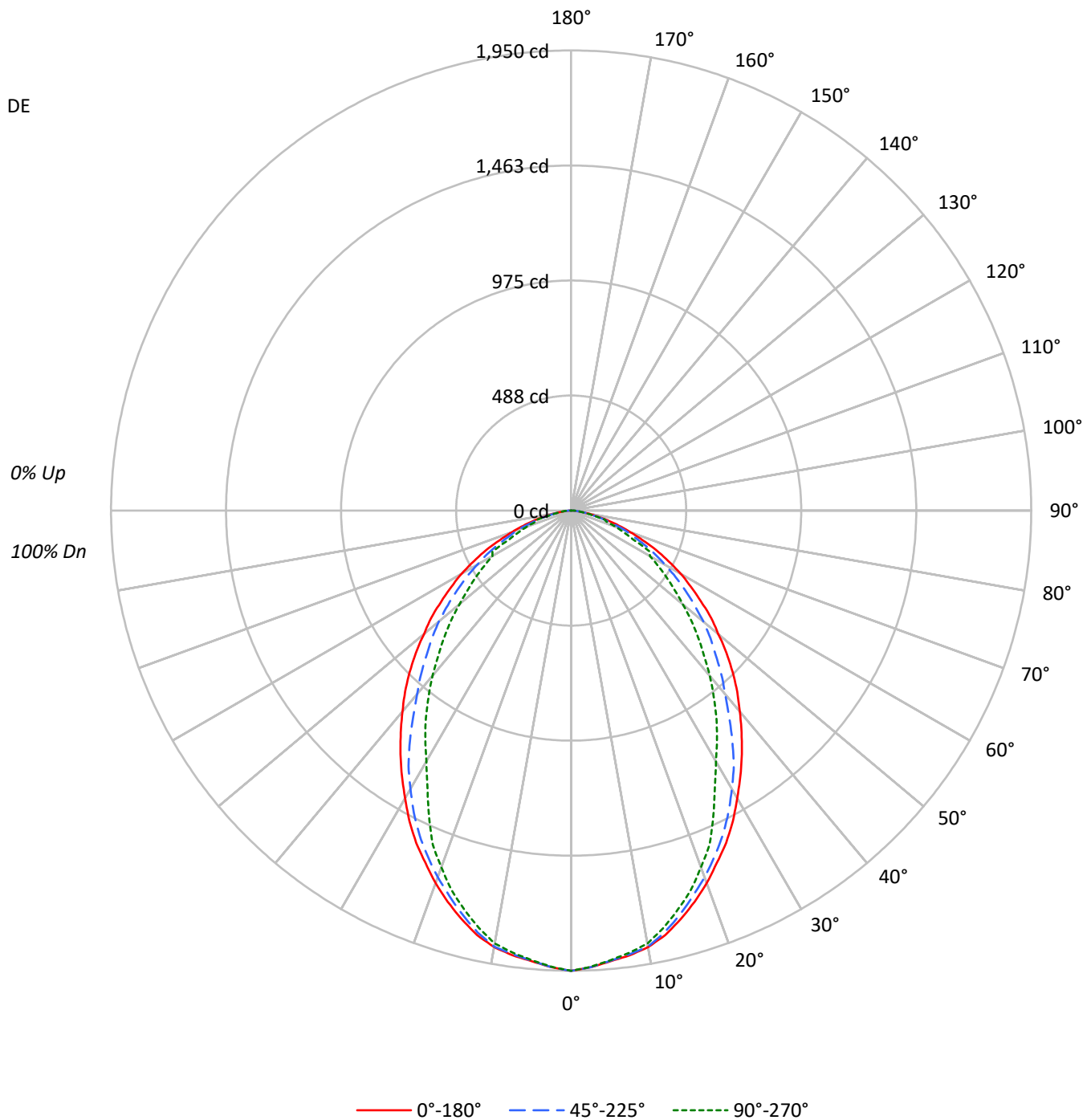
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2624	2624	2624
5°	2589	2586	2583
10°	2566	2563	2545
15°	2497	2472	2437
20°	2405	2367	2302
25°	2306	2256	2116
30°	2186	2116	1906
35°	2070	1956	1763
40°	1952	1782	1604
45°	1841	1648	1450
50°	1704	1529	1293
55°	1576	1386	1158
60°	1444	1238	1038
65°	1271	1084	919
70°	1047	949	780
75°	832	727	762
80°	559	524	489
85°	347	418	488

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1841 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.6	4.7
10°-20°	498.3	13.0
20°-30°	689.8	18.0
30°-40°	735.6	19.2
40°-50°	671.0	17.5
50°-60°	525.7	13.7
60°-70°	342.6	8.9
70°-80°	151.8	4.0
80°-90°	32.6	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°	1369.7	35.8
0°-40°	2105.2	55.0
0°-60°	3302.0	86.2
0°-90°	3829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1950	1950	1950	1950	1950	
5°	1917	1914	1914	1912	1912	182
15°	1793	1793	1775	1756	1750	504
25°	1554	1545	1520	1466	1425	713
35°	1260	1251	1191	1100	1073	788
45°	967	947	866	794	762	745
55°	672	652	591	521	494	603
65°	399	377	340	347	289	393
75°	160	149	140	133	147	172
85°	22	25	27	29	32	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1950.4	1950.4	1950.4	1950.4	1950.4
2.5°	1936.9	1936.9	1936.9	1934.7	1934.7
5°	1916.6	1914.4	1914.4	1912.1	1912.1
7.5°	1900.8	1898.6	1896.3	1894.1	1889.6
10°	1878.3	1878.3	1876.0	1864.8	1862.5
12.5°	1842.2	1840.0	1830.9	1815.2	1810.6
15°	1792.6	1792.6	1774.6	1756.5	1749.8
17.5°	1738.5	1736.2	1713.7	1695.6	1686.6
20°	1679.9	1675.4	1652.8	1623.5	1607.7
22.5°	1614.5	1614.5	1587.4	1549.1	1533.3
25°	1553.6	1544.6	1519.8	1465.6	1425.1
27.5°	1483.7	1470.2	1443.1	1366.4	1319.1
30°	1407.0	1400.3	1361.9	1262.7	1226.6
32.5°	1334.9	1323.6	1283.0	1179.3	1150.0
35°	1260.5	1251.4	1190.6	1100.4	1073.3
37.5°	1186.0	1174.8	1098.1	1026.0	992.1
40°	1111.6	1098.1	1014.7	949.3	913.2
42.5°	1041.7	1023.7	942.5	872.6	832.0
45°	967.3	947.0	865.9	793.7	762.1
47.5°	892.9	874.9	800.5	726.1	690.0
50°	814.0	798.2	730.6	656.2	617.8
52.5°	748.6	723.8	658.4	584.0	552.4
55°	671.9	651.7	590.8	520.9	493.8
57.5°	602.0	581.8	525.4	460.0	437.4
60°	536.7	507.3	460.0	403.6	385.6
62.5°	464.5	441.9	401.4	354.0	376.6
65°	399.1	376.6	340.5	347.2	288.6
67.5°	327.0	315.7	284.1	252.5	243.5
70°	266.1	252.5	241.3	207.4	198.4
72.5°	212.0	198.4	182.6	164.6	157.8
75°	160.1	148.8	139.8	133.0	146.6
77.5°	110.5	106.0	99.2	92.4	90.2
80°	72.2	69.9	67.6	65.4	63.1
82.5°	42.8	42.8	42.8	42.8	42.8
85°	22.5	24.8	27.1	29.3	31.6
87.5°	13.5	13.5	15.8	18.0	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)