

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: P562706

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562706
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-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4445.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

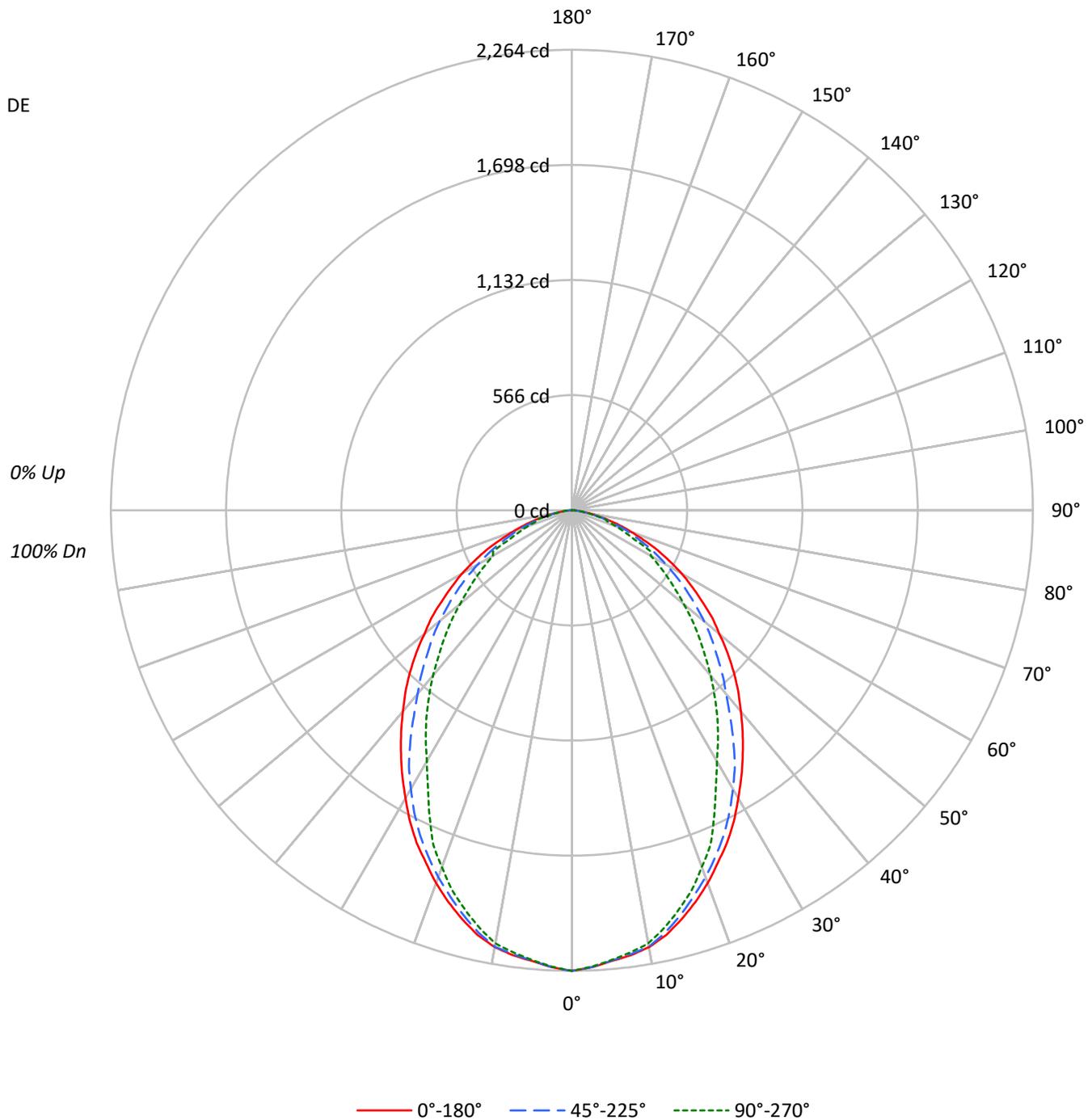
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	3046	3046	3046
5°	3005	3002	2998
10°	2979	2975	2954
15°	2899	2870	2830
20°	2792	2747	2672
25°	2677	2619	2456
30°	2538	2456	2212
35°	2403	2270	2047
40°	2267	2069	1862
45°	2137	1913	1683
50°	1978	1775	1501
55°	1830	1609	1345
60°	1676	1437	1204
65°	1475	1259	1067
70°	1215	1102	906
75°	966	844	884
80°	649	608	568
85°	404	485	565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2137 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.8	4.7
10°-20°	578.4	13.0
20°-30°	800.8	18.0
30°-40°	853.9	19.2
40°-50°	779.0	17.5
50°-60°	610.3	13.7
60°-70°	397.8	8.9
70°-80°	176.2	4.0
80°-90°	37.8	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°	1590.0	35.8
0°-40°	2443.9	55.0
0°-60°	3833.2	86.2
0°-90°	4445.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4445.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2264	2264	2264	2264	2264	
5°	2225	2222	2222	2220	2220	211
15°	2081	2081	2060	2039	2031	585
25°	1804	1793	1764	1701	1654	828
35°	1463	1453	1382	1277	1246	915
45°	1123	1099	1005	921	885	865
55°	780	756	686	605	573	700
65°	463	437	395	403	335	457
75°	186	173	162	154	170	199
85°	26	29	31	34	37	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2264.2	2264.2	2264.2	2264.2	2264.2
2.5°	2248.5	2248.5	2248.5	2245.9	2245.9
5°	2225.0	2222.3	2222.3	2219.7	2219.7
7.5°	2206.6	2204.0	2201.4	2198.8	2193.5
10°	2180.5	2180.5	2177.8	2164.8	2162.1
12.5°	2138.6	2136.0	2125.5	2107.2	2101.9
15°	2081.0	2081.0	2060.1	2039.1	2031.3
17.5°	2018.2	2015.6	1989.4	1968.4	1958.0
20°	1950.1	1944.9	1918.7	1884.7	1866.3
22.5°	1874.2	1874.2	1842.8	1798.3	1780.0
25°	1803.5	1793.1	1764.3	1701.4	1654.3
27.5°	1722.4	1706.7	1675.3	1586.3	1531.3
30°	1633.4	1625.5	1581.0	1465.9	1424.0
32.5°	1549.6	1536.5	1489.4	1369.0	1335.0
35°	1463.2	1452.8	1382.1	1277.4	1246.0
37.5°	1376.9	1363.8	1274.8	1191.0	1151.7
40°	1290.5	1274.8	1177.9	1102.0	1060.1
42.5°	1209.3	1188.4	1094.2	1013.0	965.9
45°	1123.0	1099.4	1005.2	921.4	884.7
47.5°	1036.6	1015.6	929.2	842.9	801.0
50°	945.0	926.6	848.1	761.7	717.2
52.5°	869.0	840.2	764.3	678.0	641.3
55°	780.0	756.5	685.8	604.7	573.3
57.5°	698.9	675.3	609.9	534.0	507.8
60°	623.0	589.0	534.0	468.6	447.6
62.5°	539.2	513.0	465.9	411.0	437.1
65°	463.3	437.1	395.3	403.1	335.1
67.5°	379.6	366.5	329.8	293.2	282.7
70°	308.9	293.2	280.1	240.8	230.3
72.5°	246.1	230.3	212.0	191.1	183.2
75°	185.8	172.8	162.3	154.4	170.1
77.5°	128.3	123.0	115.2	107.3	104.7
80°	83.8	81.1	78.5	75.9	73.3
82.5°	49.7	49.7	49.7	49.7	49.7
85°	26.2	28.8	31.4	34.0	36.6
87.5°	15.7	15.7	18.3	20.9	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)