

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: P562792

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562792
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-40-UNV-93-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4184.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

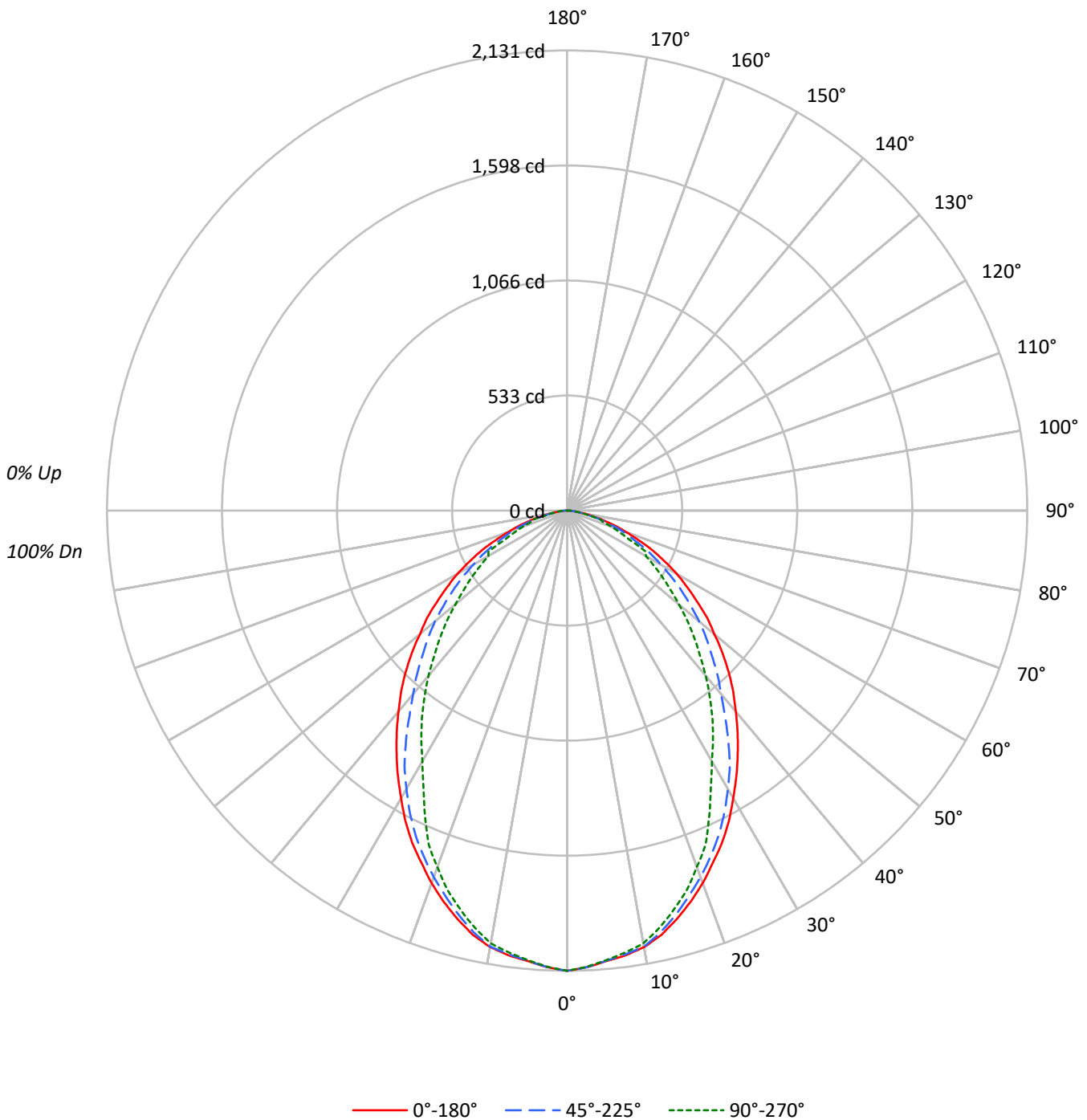
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2868	2868	2868
5°	2829	2825	2822
10°	2804	2801	2781
15°	2729	2701	2663
20°	2628	2586	2515
25°	2520	2465	2312
30°	2389	2312	2082
35°	2262	2137	1926
40°	2134	1948	1753
45°	2011	1800	1585
50°	1862	1671	1413
55°	1722	1514	1266
60°	1578	1352	1134
65°	1388	1184	1004
70°	1144	1037	853
75°	909	794	833
80°	611	573	535
85°	380	457	533

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2011 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.4	4.7
10°-20°	544.5	13.0
20°-30°	753.8	18.0
30°-40°	803.8	19.2
40°-50°	733.3	17.5
50°-60°	574.5	13.7
60°-70°	374.4	8.9
70°-80°	165.9	4.0
80°-90°	35.6	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°	1496.7	35.8
0°-40°	2300.4	55.0
0°-60°	3608.1	86.2
0°-90°	4184.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4184.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2131	2131	2131	2131	2131	
5°	2094	2092	2092	2089	2089	199
15°	1959	1959	1939	1919	1912	551
25°	1698	1688	1661	1602	1557	779
35°	1377	1368	1301	1202	1173	861
45°	1057	1035	946	867	833	814
55°	734	712	646	569	540	659
65°	436	412	372	379	315	430
75°	175	163	153	145	160	187
85°	25	27	30	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2131.3	2131.3	2131.3	2131.3	2131.3
2.5°	2116.5	2116.5	2116.5	2114.0	2114.0
5°	2094.3	2091.9	2091.9	2089.4	2089.4
7.5°	2077.1	2074.6	2072.1	2069.7	2064.7
10°	2052.4	2052.4	2050.0	2037.6	2035.2
12.5°	2013.0	2010.5	2000.7	1983.4	1978.5
15°	1958.8	1958.8	1939.1	1919.4	1912.0
17.5°	1899.7	1897.2	1872.6	1852.9	1843.0
20°	1835.6	1830.7	1806.0	1774.0	1756.8
22.5°	1764.2	1764.2	1734.6	1692.7	1675.5
25°	1697.6	1687.8	1660.7	1601.5	1557.2
27.5°	1621.2	1606.5	1576.9	1493.1	1441.4
30°	1537.5	1530.1	1488.2	1379.8	1340.4
32.5°	1458.6	1446.3	1402.0	1288.6	1256.6
35°	1377.3	1367.5	1300.9	1202.4	1172.8
37.5°	1296.0	1283.7	1199.9	1121.1	1084.1
40°	1214.7	1199.9	1108.8	1037.3	997.9
42.5°	1138.3	1118.6	1029.9	953.5	909.2
45°	1057.0	1034.8	946.1	867.3	832.8
47.5°	975.7	956.0	874.7	793.4	754.0
50°	889.5	872.2	798.3	717.0	675.1
52.5°	818.0	790.9	719.5	638.2	603.7
55°	734.2	712.1	645.5	569.2	539.6
57.5°	657.9	635.7	574.1	502.6	478.0
60°	586.4	554.4	502.6	441.0	421.3
62.5°	507.6	482.9	438.6	386.8	411.5
65°	436.1	411.5	372.0	379.4	315.4
67.5°	357.3	344.9	310.5	276.0	266.1
70°	290.7	276.0	263.6	226.7	216.8
72.5°	231.6	216.8	199.6	179.9	172.5
75°	174.9	162.6	152.8	145.4	160.2
77.5°	120.7	115.8	108.4	101.0	98.6
80°	78.8	76.4	73.9	71.5	69.0
82.5°	46.8	46.8	46.8	46.8	46.8
85°	24.6	27.1	29.6	32.0	34.5
87.5°	14.8	14.8	17.2	19.7	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)