

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: P561706

Luminaire Tested: FSR-12-4-LD4-2LO-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561706
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-12-4-LD4-2LO-50-UNV-93-94-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4452.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

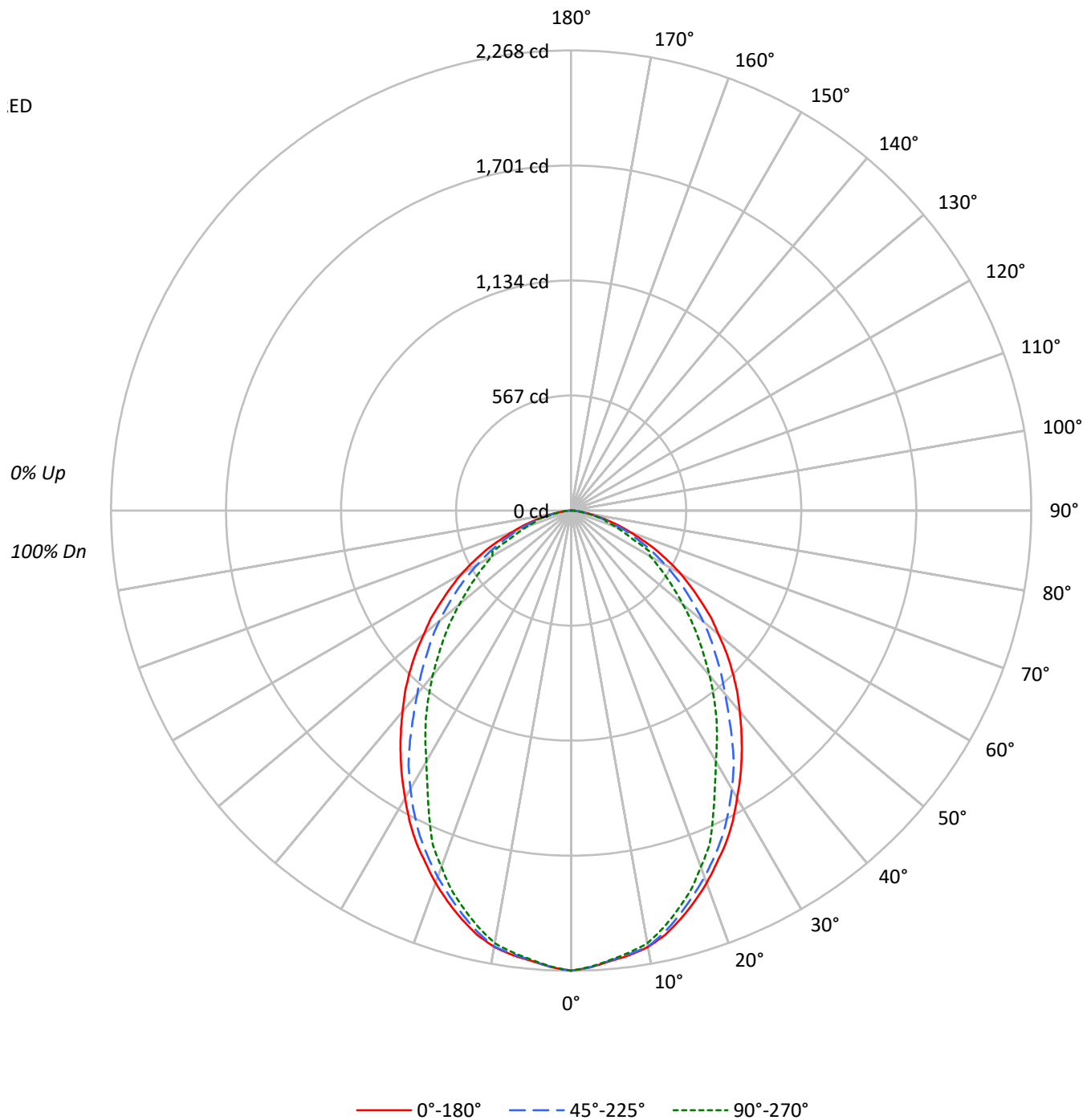
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	6103	6103	6103
5°	6020	6012	6005
10°	5967	5960	5917
15°	5807	5748	5668
20°	5593	5503	5353
25°	5364	5247	4920
30°	5084	4920	4432
35°	4814	4548	4099
40°	4540	4144	3730
45°	4280	3831	3372
50°	3962	3556	3008
55°	3666	3223	2694
60°	3358	2878	2413
65°	2954	2521	2137
70°	2434	2207	1815
75°	1935	1690	1772
80°	1300	1220	1137
85°	809	973	1133

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4280 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.1	4.7
10°-20°	579.3	13.0
20°-30°	802.1	18.0
30°-40°	855.2	19.2
40°-50°	780.2	17.5
50°-60°	611.2	13.7
60°-70°	398.4	8.9
70°-80°	176.5	4.0
80°-90°	37.9	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°	1592.5	35.8
0°-40°	2447.8	55.0
0°-60°	3839.2	86.2
0°-90°	4452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2268	2268	2268	2268	2268	
5°	2228	2226	2226	2223	2223	212
15°	2084	2084	2063	2042	2034	586
25°	1806	1796	1767	1704	1657	829
35°	1466	1455	1384	1279	1248	916
45°	1125	1101	1007	923	886	866
55°	781	758	687	606	574	701
65°	464	438	396	404	336	457
75°	186	173	162	155	170	199
85°	26	29	32	34	37	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2267.8	2267.8	2267.8	2267.8	2267.8
2.5°	2252.1	2252.1	2252.1	2249.4	2249.4
5°	2228.5	2225.8	2225.8	2223.2	2223.2
7.5°	2210.1	2207.5	2204.9	2202.2	2197.0
10°	2183.9	2183.9	2181.3	2168.2	2165.5
12.5°	2141.9	2139.3	2128.8	2110.5	2105.2
15°	2084.3	2084.3	2063.3	2042.3	2034.5
17.5°	2021.3	2018.7	1992.5	1971.5	1961.0
20°	1953.2	1947.9	1921.7	1887.6	1869.3
22.5°	1877.2	1877.2	1845.7	1801.1	1782.8
25°	1806.4	1795.9	1767.0	1704.1	1656.9
27.5°	1725.1	1709.4	1677.9	1588.8	1533.7
30°	1636.0	1628.1	1583.5	1468.2	1426.2
32.5°	1552.1	1539.0	1491.8	1371.2	1337.1
35°	1465.5	1455.1	1384.3	1279.4	1247.9
37.5°	1379.0	1365.9	1276.8	1192.9	1153.6
40°	1292.5	1276.8	1179.8	1103.7	1061.8
42.5°	1211.2	1190.3	1095.9	1014.6	967.4
45°	1124.7	1101.1	1006.7	922.8	886.1
47.5°	1038.2	1017.2	930.7	844.2	802.2
50°	946.4	928.1	849.4	762.9	718.4
52.5°	870.4	841.6	765.5	679.0	642.3
55°	781.3	757.7	686.9	605.6	574.2
57.5°	700.0	676.4	610.9	534.8	508.6
60°	624.0	589.9	534.8	469.3	448.3
62.5°	540.1	513.9	466.7	411.6	437.8
65°	464.0	437.8	395.9	403.7	335.6
67.5°	380.1	367.0	330.3	293.6	283.1
70°	309.4	293.6	280.5	241.2	230.7
72.5°	246.4	230.7	212.4	191.4	183.5
75°	186.1	173.0	162.5	154.7	170.4
77.5°	128.5	123.2	115.4	107.5	104.9
80°	83.9	81.3	78.7	76.0	73.4
82.5°	49.8	49.8	49.8	49.8	49.8
85°	26.2	28.8	31.5	34.1	36.7
87.5°	15.7	15.7	18.4	21.0	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)