

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: P562798

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562798
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-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4736.0 lumens
Efficiency: N/A
Efficacy: 101.2 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

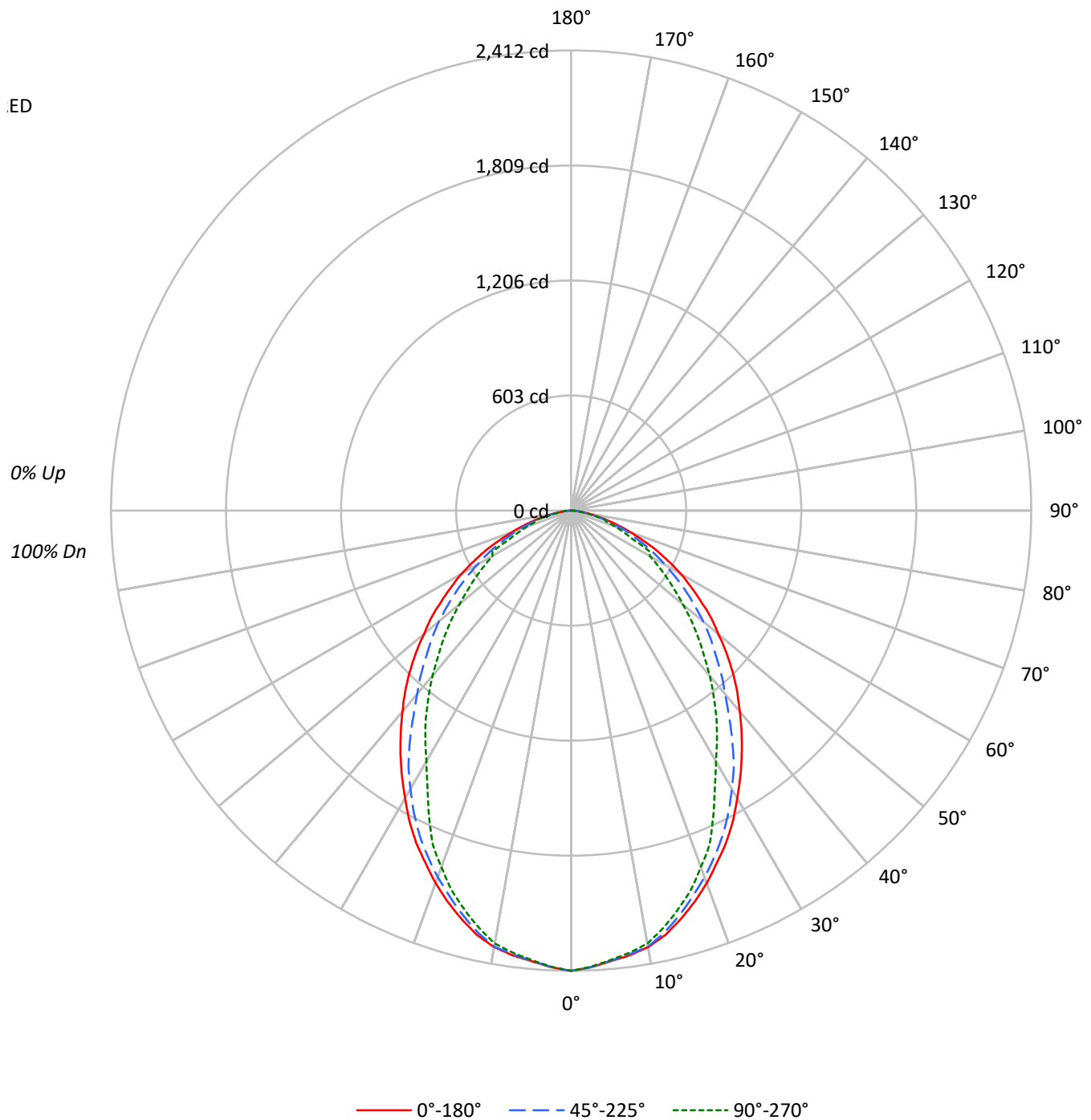
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3246	3246	3246
5°	3202	3198	3194
10°	3174	3170	3147
15°	3088	3057	3015
20°	2975	2927	2847
25°	2853	2791	2617
30°	2704	2617	2357
35°	2561	2419	2180
40°	2415	2204	1984
45°	2277	2038	1794
50°	2107	1891	1600
55°	1950	1714	1433
60°	1786	1531	1283
65°	1571	1341	1137
70°	1295	1174	965
75°	1029	899	943
80°	691	649	605
85°	431	517	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2277 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.6	4.7
10°-20°	616.3	13.0
20°-30°	853.2	18.0
30°-40°	909.8	19.2
40°-50°	830.0	17.5
50°-60°	650.2	13.7
60°-70°	423.8	8.9
70°-80°	187.8	4.0
80°-90°	40.3	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°	1694.1	35.8
0°-40°	2603.9	55.0
0°-60°	4084.1	86.2
0°-90°	4736.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4736.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2412	2412	2412	2412	2412	
5°	2371	2368	2368	2365	2365	225
15°	2217	2217	2195	2173	2164	623
25°	1922	1910	1880	1813	1763	882
35°	1559	1548	1473	1361	1328	975
45°	1196	1171	1071	982	943	922
55°	831	806	731	644	611	745
65°	494	466	421	430	357	486
75°	198	184	173	164	181	212
85°	28	31	34	36	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2412.5	2412.5	2412.5	2412.5	2412.5
2.5°	2395.7	2395.7	2395.7	2392.9	2392.9
5°	2370.6	2367.8	2367.8	2365.0	2365.0
7.5°	2351.1	2348.3	2345.5	2342.7	2337.2
10°	2323.2	2323.2	2320.4	2306.5	2303.7
12.5°	2278.6	2275.8	2264.6	2245.1	2239.5
15°	2217.2	2217.2	2194.9	2172.6	2164.2
17.5°	2150.3	2147.5	2119.6	2097.3	2086.1
20°	2077.8	2072.2	2044.3	2008.1	1988.5
22.5°	1996.9	1996.9	1963.4	1916.0	1896.5
25°	1921.6	1910.4	1879.8	1812.8	1762.6
27.5°	1835.1	1818.4	1784.9	1690.1	1631.5
30°	1740.3	1731.9	1684.5	1561.8	1517.2
32.5°	1651.1	1637.1	1586.9	1458.6	1422.4
35°	1559.0	1547.9	1472.6	1361.0	1327.5
37.5°	1467.0	1453.1	1358.2	1269.0	1227.1
40°	1375.0	1358.2	1255.0	1174.2	1129.5
42.5°	1288.5	1266.2	1165.8	1079.3	1029.1
45°	1196.5	1171.4	1071.0	981.7	942.7
47.5°	1104.4	1082.1	990.1	898.0	853.4
50°	1006.8	987.3	903.6	811.6	764.2
52.5°	925.9	895.3	814.4	722.3	683.3
55°	831.1	806.0	730.7	644.3	610.8
57.5°	744.7	719.6	649.8	568.9	541.1
60°	663.8	627.5	568.9	499.2	476.9
62.5°	574.5	546.6	496.4	437.9	465.8
65°	493.6	465.8	421.1	429.5	357.0
67.5°	404.4	390.5	351.4	312.4	301.2
70°	329.1	312.4	298.4	256.6	245.4
72.5°	262.2	245.4	225.9	203.6	195.2
75°	198.0	184.1	172.9	164.5	181.3
77.5°	136.7	131.1	122.7	114.3	111.6
80°	89.2	86.5	83.7	80.9	78.1
82.5°	53.0	53.0	53.0	53.0	53.0
85°	27.9	30.7	33.5	36.3	39.0
87.5°	16.7	16.7	19.5	22.3	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)