

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: P561799

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561799
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-LD4-2STD-40-UNV-81-87-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5976.0 lumens
Efficiency: N/A
Efficacy: 89.7 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

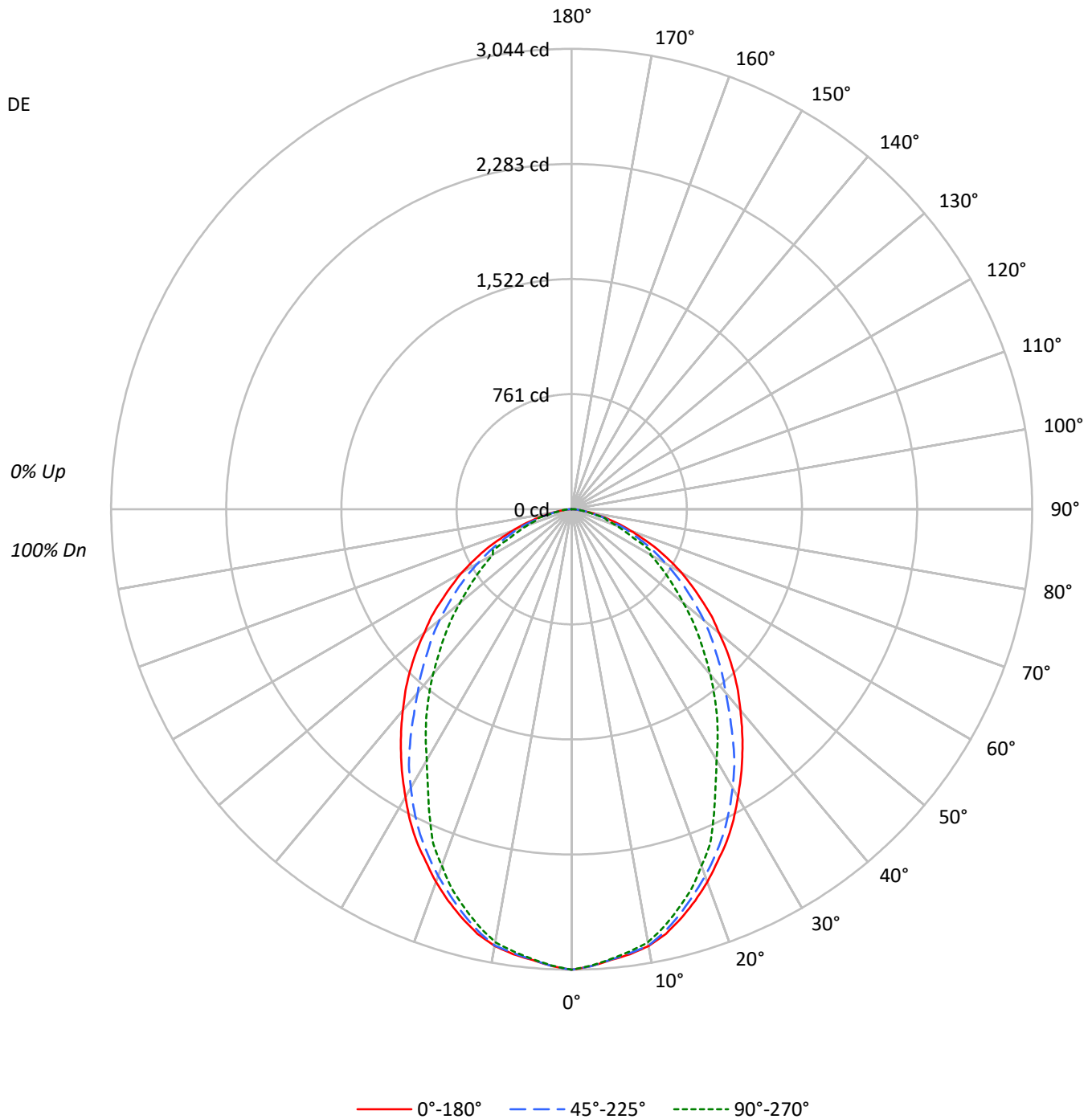
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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											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°	8192	8192	8192
5°	8080	8071	8061
10°	8010	8001	7943
15°	7794	7716	7608
20°	7508	7387	7186
25°	7199	7043	6604
30°	6824	6605	5949
35°	6462	6104	5503
40°	6095	5563	5007
45°	5745	5143	4527
50°	5318	4773	4037
55°	4920	4326	3616
60°	4508	3864	3239
65°	3966	3384	2869
70°	3268	2963	2437
75°	2598	2269	2378
80°	1745	1636	1526
85°	1087	1303	1522

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5745 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.4	4.7
10°-20°	777.7	13.0
20°-30°	1076.6	18.0
30°-40°	1148.0	19.2
40°-50°	1047.3	17.5
50°-60°	820.5	13.7
60°-70°	534.8	8.9
70°-80°	236.9	4.0
80°-90°	50.9	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°	2137.7	35.8
0°-40°	3285.7	55.0
0°-60°	5153.5	86.2
0°-90°	5976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3044	3044	3044	3044	3044	
5°	2991	2988	2988	2984	2984	284
15°	2798	2798	2770	2741	2731	787
25°	2425	2411	2372	2288	2224	1113
35°	1967	1953	1858	1717	1675	1230
45°	1510	1478	1351	1239	1190	1163
55°	1049	1017	922	813	771	941
65°	623	588	531	542	450	614
75°	250	232	218	208	229	268
85°	35	39	42	46	49	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3044.1	3044.1	3044.1	3044.1	3044.1
2.5°	3023.0	3023.0	3023.0	3019.5	3019.5
5°	2991.3	2987.8	2987.8	2984.3	2984.3
7.5°	2966.7	2963.2	2959.6	2956.1	2949.1
10°	2931.5	2931.5	2928.0	2910.4	2906.8
12.5°	2875.2	2871.7	2857.6	2832.9	2825.9
15°	2797.8	2797.8	2769.6	2741.4	2730.9
17.5°	2713.3	2709.8	2674.6	2646.4	2632.3
20°	2621.8	2614.8	2579.6	2533.8	2509.2
22.5°	2519.7	2519.7	2477.5	2417.7	2393.0
25°	2424.7	2410.6	2371.9	2287.5	2224.1
27.5°	2315.6	2294.5	2252.3	2132.6	2058.7
30°	2196.0	2185.4	2125.6	1970.7	1914.4
32.5°	2083.4	2065.8	2002.4	1840.5	1794.8
35°	1967.2	1953.1	1858.1	1717.4	1675.1
37.5°	1851.1	1833.5	1713.8	1601.2	1548.4
40°	1735.0	1713.8	1583.6	1481.6	1425.3
42.5°	1625.9	1597.7	1471.0	1361.9	1298.6
45°	1509.7	1478.1	1351.4	1238.8	1189.5
47.5°	1393.6	1365.4	1249.3	1133.2	1076.9
50°	1270.4	1245.8	1140.2	1024.1	964.3
52.5°	1168.4	1129.7	1027.6	911.5	862.2
55°	1048.7	1017.0	922.0	812.9	770.7
57.5°	939.6	907.9	820.0	717.9	682.7
60°	837.6	791.8	717.9	629.9	601.8
62.5°	725.0	689.8	626.4	552.5	587.7
65°	622.9	587.7	531.4	542.0	450.5
67.5°	510.3	492.7	443.4	394.1	380.1
70°	415.3	394.1	376.6	323.8	309.7
72.5°	330.8	309.7	285.1	256.9	246.3
75°	249.9	232.3	218.2	207.6	228.7
77.5°	172.4	165.4	154.8	144.3	140.8
80°	112.6	109.1	105.6	102.1	98.5
82.5°	66.9	66.9	66.9	66.9	66.9
85°	35.2	38.7	42.2	45.7	49.3
87.5°	21.1	21.1	24.6	28.2	31.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)