

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: P562785

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562785
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-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5898.0 lumens
Efficiency: N/A
Efficacy: 126.0 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

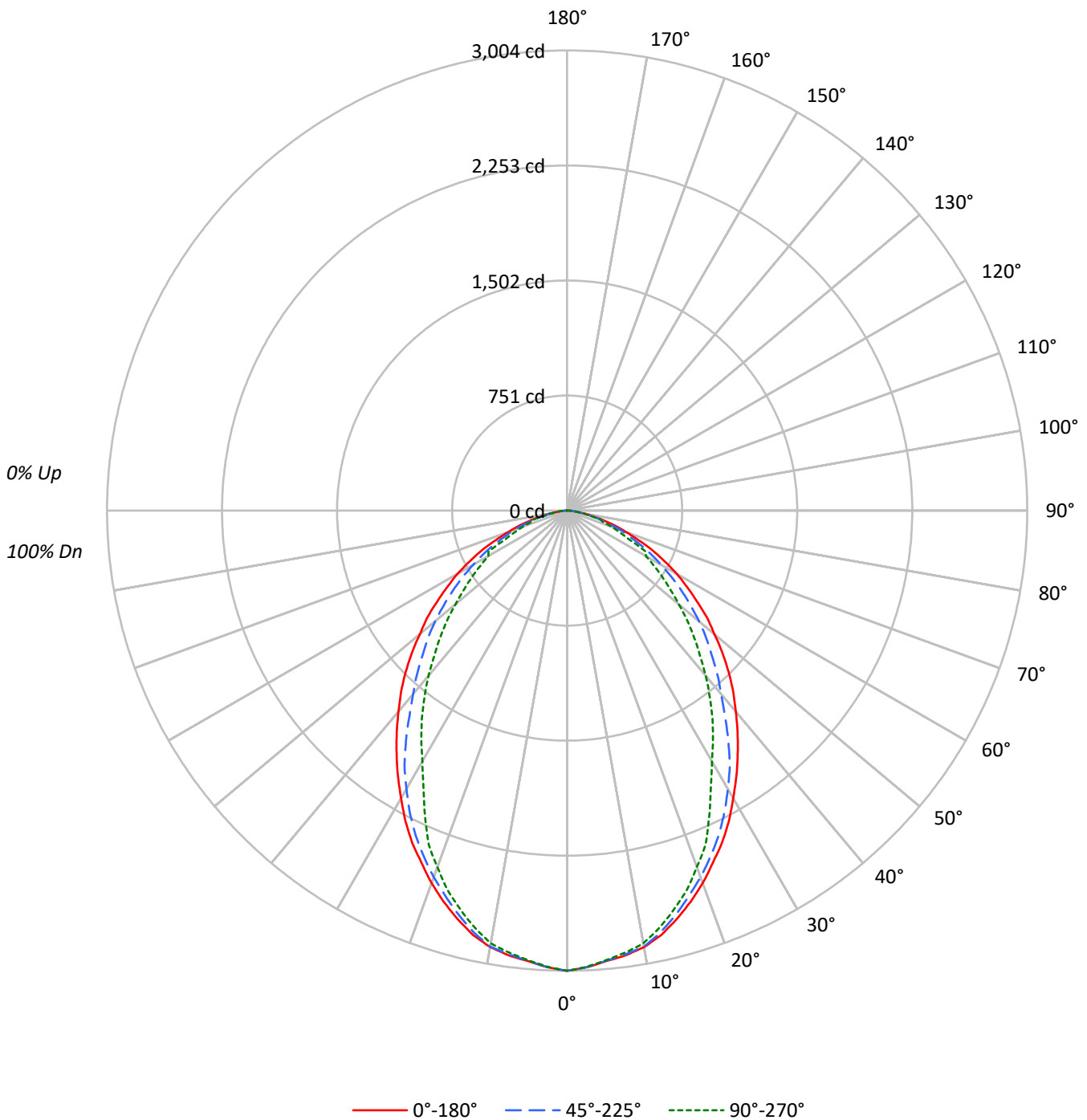
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4042	4042	4042
5°	3987	3983	3978
10°	3953	3948	3920
15°	3846	3807	3754
20°	3705	3645	3546
25°	3553	3475	3259
30°	3367	3259	2935
35°	3189	3012	2716
40°	3008	2745	2471
45°	2835	2538	2234
50°	2624	2355	1992
55°	2428	2135	1784
60°	2224	1907	1598
65°	1957	1670	1415
70°	1612	1462	1202
75°	1282	1119	1174
80°	861	807	754
85°	536	644	750

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2835 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.7	4.7
10°-20°	767.5	13.0
20°-30°	1062.6	18.0
30°-40°	1133.0	19.2
40°-50°	1033.6	17.5
50°-60°	809.8	13.7
60°-70°	527.8	8.9
70°-80°	233.8	4.0
80°-90°	50.2	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°	2109.8	35.8
0°-40°	3242.8	55.0
0°-60°	5086.2	86.2
0°-90°	5898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3004	3004	3004	3004	3004	
5°	2952	2949	2949	2945	2945	280
15°	2761	2761	2733	2706	2695	776
25°	2393	2379	2341	2258	2195	1099
35°	1942	1928	1834	1695	1653	1214
45°	1490	1459	1334	1223	1174	1148
55°	1035	1004	910	802	761	928
65°	615	580	524	535	445	606
75°	247	229	215	205	226	264
85°	35	38	42	45	49	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3004.4	3004.4	3004.4	3004.4	3004.4
2.5°	2983.5	2983.5	2983.5	2980.0	2980.0
5°	2952.3	2948.8	2948.8	2945.3	2945.3
7.5°	2928.0	2924.5	2921.0	2917.5	2910.6
10°	2893.2	2893.2	2889.7	2872.4	2868.9
12.5°	2837.6	2834.2	2820.3	2796.0	2789.0
15°	2761.2	2761.2	2733.4	2705.7	2695.2
17.5°	2677.9	2674.4	2639.7	2611.9	2598.0
20°	2587.6	2580.6	2545.9	2500.7	2476.4
22.5°	2486.8	2486.8	2445.2	2386.1	2361.8
25°	2393.1	2379.2	2341.0	2257.6	2195.1
27.5°	2285.4	2264.6	2222.9	2104.8	2031.9
30°	2167.3	2156.9	2097.8	1945.0	1889.4
32.5°	2056.2	2038.8	1976.3	1816.5	1771.4
35°	1941.5	1927.7	1833.9	1694.9	1653.3
37.5°	1826.9	1809.6	1691.5	1580.3	1528.2
40°	1712.3	1691.5	1563.0	1462.2	1406.7
42.5°	1604.6	1576.9	1451.8	1344.1	1281.6
45°	1490.0	1458.8	1333.7	1222.6	1174.0
47.5°	1375.4	1347.6	1233.0	1118.4	1062.8
50°	1253.8	1229.5	1125.3	1010.7	951.7
52.5°	1153.1	1114.9	1014.2	899.6	850.9
55°	1035.0	1003.8	910.0	802.3	760.6
57.5°	927.4	896.1	809.3	708.5	673.8
60°	826.6	781.5	708.5	621.7	593.9
62.5°	715.5	680.8	618.2	545.3	580.0
65°	614.8	580.0	524.5	534.9	444.6
67.5°	503.6	486.3	437.6	389.0	375.1
70°	409.8	389.0	371.6	319.5	305.6
72.5°	326.5	305.6	281.3	253.5	243.1
75°	246.6	229.2	215.3	204.9	225.8
77.5°	170.2	163.2	152.8	142.4	138.9
80°	111.1	107.7	104.2	100.7	97.3
82.5°	66.0	66.0	66.0	66.0	66.0
85°	34.7	38.2	41.7	45.2	48.6
87.5°	20.8	20.8	24.3	27.8	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)