

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: P563420

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563420
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-LD4-3LO-50-UNV-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7202.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

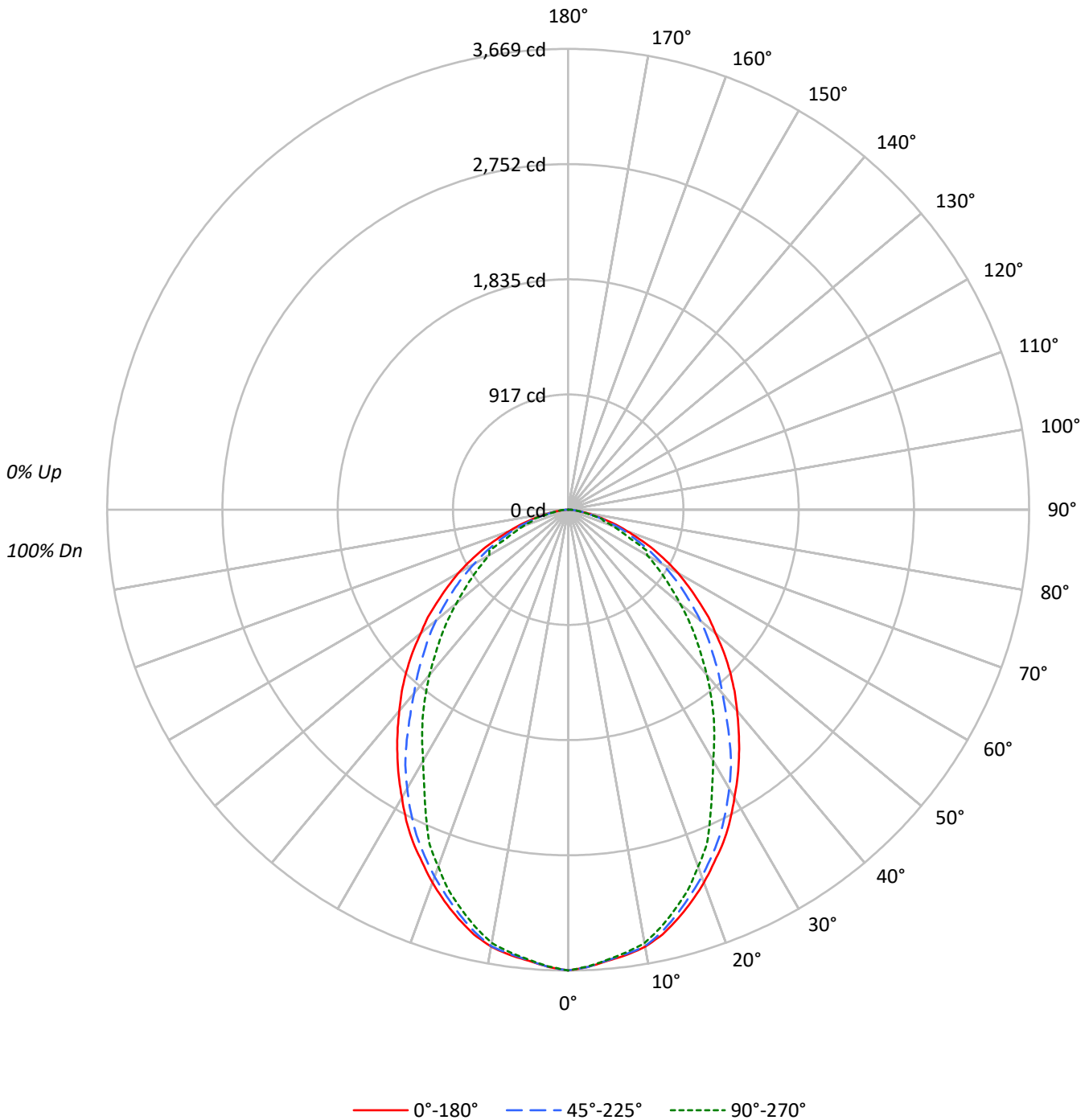
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4936	4936	4936
5°	4869	4863	4858
10°	4827	4821	4786
15°	4697	4649	4584
20°	4524	4451	4330
25°	4338	4244	3979
30°	4112	3980	3585
35°	3894	3678	3316
40°	3672	3352	3017
45°	3462	3099	2728
50°	3205	2876	2433
55°	2965	2607	2179
60°	2716	2328	1951
65°	2390	2039	1728
70°	1969	1785	1468
75°	1565	1367	1433
80°	1051	986	921
85°	655	786	917

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3462 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.5	4.7
10°-20°	937.2	13.0
20°-30°	1297.5	18.0
30°-40°	1383.5	19.2
40°-50°	1262.2	17.5
50°-60°	988.8	13.7
60°-70°	644.5	8.9
70°-80°	285.5	4.0
80°-90°	61.3	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°	2576.2	35.8
0°-40°	3959.7	55.0
0°-60°	6210.7	86.2
0°-90°	7202.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7202.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3669	3669	3669	3669	3669	
5°	3605	3601	3601	3596	3596	342
15°	3372	3372	3338	3304	3291	948
25°	2922	2905	2858	2757	2680	1342
35°	2371	2354	2239	2070	2019	1482
45°	1820	1781	1629	1493	1434	1402
55°	1264	1226	1111	980	929	1134
65°	751	708	640	653	543	740
75°	301	280	263	250	276	323
85°	42	47	51	55	59	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3668.6	3668.6	3668.6	3668.6	3668.6
2.5°	3643.2	3643.2	3643.2	3638.9	3638.9
5°	3605.0	3600.7	3600.7	3596.5	3596.5
7.5°	3575.3	3571.1	3566.8	3562.6	3554.1
10°	3532.9	3532.9	3528.6	3507.4	3503.2
12.5°	3465.0	3460.8	3443.8	3414.1	3405.7
15°	3371.7	3371.7	3337.8	3303.9	3291.1
17.5°	3269.9	3265.7	3223.3	3189.4	3172.4
20°	3159.7	3151.2	3108.8	3053.6	3023.9
22.5°	3036.7	3036.7	2985.8	2913.7	2884.0
25°	2922.2	2905.2	2858.5	2756.8	2680.4
27.5°	2790.7	2765.2	2714.3	2570.1	2481.1
30°	2646.5	2633.8	2561.7	2375.0	2307.2
32.5°	2510.8	2489.6	2413.2	2218.1	2163.0
35°	2370.8	2353.8	2239.3	2069.7	2018.8
37.5°	2230.8	2209.6	2065.4	1929.7	1866.1
40°	2090.9	2065.4	1908.5	1785.5	1717.7
42.5°	1959.4	1925.5	1772.8	1641.3	1565.0
45°	1819.5	1781.3	1628.6	1492.9	1433.5
47.5°	1679.5	1645.6	1505.6	1365.7	1297.8
50°	1531.1	1501.4	1374.1	1234.2	1162.1
52.5°	1408.1	1361.4	1238.4	1098.5	1039.1
55°	1263.9	1225.7	1111.2	979.7	928.8
57.5°	1132.4	1094.2	988.2	865.2	822.8
60°	1009.4	954.3	865.2	759.2	725.2
62.5°	873.7	831.3	754.9	665.9	708.3
65°	750.7	708.3	640.4	653.1	542.9
67.5°	615.0	593.8	534.4	475.0	458.0
70°	500.5	475.0	453.8	390.2	373.2
72.5°	398.7	373.2	343.5	309.6	296.9
75°	301.1	279.9	263.0	250.2	275.7
77.5°	207.8	199.3	186.6	173.9	169.6
80°	135.7	131.5	127.2	123.0	118.8
82.5°	80.6	80.6	80.6	80.6	80.6
85°	42.4	46.7	50.9	55.1	59.4
87.5°	25.4	25.4	29.7	33.9	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)