

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: P563018

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563018
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-LD4-2STD-50-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 6641.0 lumens
Efficiency: N/A
Efficacy: 99.7 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

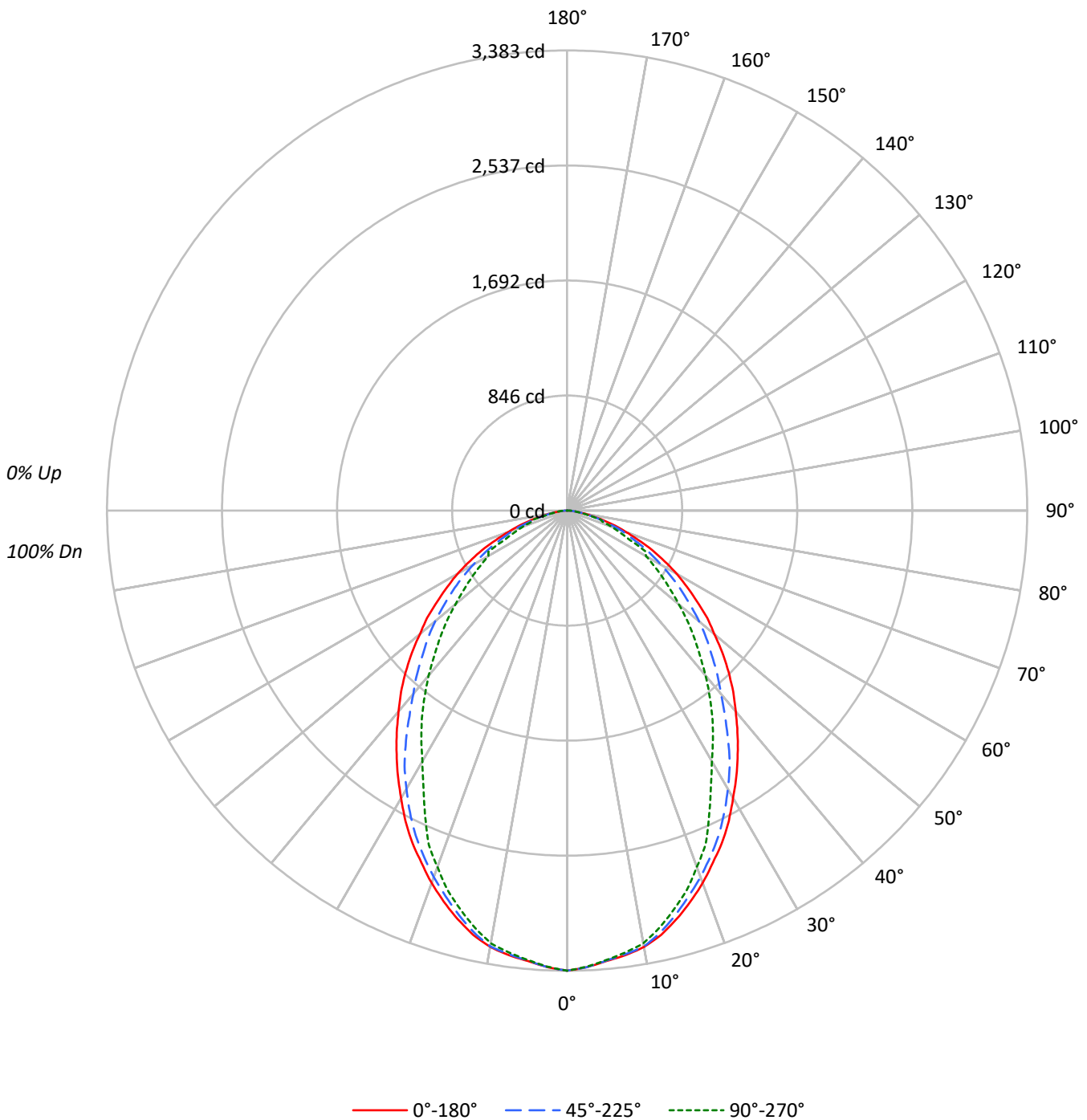
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	4552	4552	4552
5°	4490	4484	4479
10°	4451	4445	4413
15°	4331	4287	4227
20°	4172	4105	3993
25°	4000	3913	3669
30°	3791	3670	3305
35°	3591	3392	3058
40°	3386	3091	2782
45°	3192	2857	2515
50°	2955	2652	2243
55°	2734	2403	2009
60°	2505	2147	1799
65°	2204	1880	1594
70°	1816	1646	1354
75°	1444	1261	1321
80°	969	909	848
85°	604	724	846

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3192 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.9	4.7
10°-20°	864.2	13.0
20°-30°	1196.4	18.0
30°-40°	1275.7	19.2
40°-50°	1163.9	17.5
50°-60°	911.8	13.7
60°-70°	594.3	8.9
70°-80°	263.3	4.0
80°-90°	56.5	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°	2375.5	35.8
0°-40°	3651.3	55.0
0°-60°	5726.9	86.2
0°-90°	6641.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6641.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3383	3383	3383	3383	3383	
5°	3324	3320	3320	3316	3316	316
15°	3109	3109	3078	3046	3035	874
25°	2694	2679	2636	2542	2472	1237
35°	2186	2170	2065	1908	1862	1367
45°	1678	1642	1502	1377	1322	1292
55°	1165	1130	1025	903	856	1045
65°	692	653	590	602	501	682
75°	278	258	242	231	254	298
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3382.8	3382.8	3382.8	3382.8	3382.8
2.5°	3359.4	3359.4	3359.4	3355.5	3355.5
5°	3324.2	3320.3	3320.3	3316.4	3316.4
7.5°	3296.8	3292.9	3289.0	3285.1	3277.2
10°	3257.7	3257.7	3253.8	3234.2	3230.3
12.5°	3195.1	3191.2	3175.6	3148.2	3140.4
15°	3109.1	3109.1	3077.8	3046.5	3034.8
17.5°	3015.2	3011.3	2972.2	2940.9	2925.3
20°	2913.5	2905.7	2866.6	2815.8	2788.4
22.5°	2800.1	2800.1	2753.2	2686.7	2659.3
25°	2694.5	2678.9	2635.9	2542.0	2471.6
27.5°	2573.3	2549.8	2502.9	2369.9	2287.8
30°	2440.3	2428.6	2362.1	2190.0	2127.5
32.5°	2315.2	2295.6	2225.2	2045.3	1994.5
35°	2186.1	2170.5	2064.9	1908.5	1861.5
37.5°	2057.1	2037.5	1904.6	1779.4	1720.7
40°	1928.0	1904.6	1759.9	1646.4	1583.9
42.5°	1806.8	1775.5	1634.7	1513.5	1443.1
45°	1677.7	1642.5	1501.7	1376.6	1321.8
47.5°	1548.7	1517.4	1388.3	1259.3	1196.7
50°	1411.8	1384.4	1267.1	1138.0	1071.6
52.5°	1298.4	1255.4	1142.0	1012.9	958.1
55°	1165.4	1130.2	1024.6	903.4	856.5
57.5°	1044.2	1009.0	911.2	797.8	758.7
60°	930.8	879.9	797.8	700.0	668.7
62.5°	805.6	766.5	696.1	614.0	653.1
65°	692.2	653.1	590.5	602.3	500.6
67.5°	567.1	547.5	492.8	438.0	422.4
70°	461.5	438.0	418.5	359.8	344.1
72.5°	367.6	344.1	316.8	285.5	273.8
75°	277.7	258.1	242.5	230.7	254.2
77.5°	191.6	183.8	172.1	160.3	156.4
80°	125.1	121.2	117.3	113.4	109.5
82.5°	74.3	74.3	74.3	74.3	74.3
85°	39.1	43.0	46.9	50.8	54.8
87.5°	23.5	23.5	27.4	31.3	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)