

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: P563414

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563414
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-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6812.0 lumens
Efficiency: N/A
Efficacy: 97.0 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

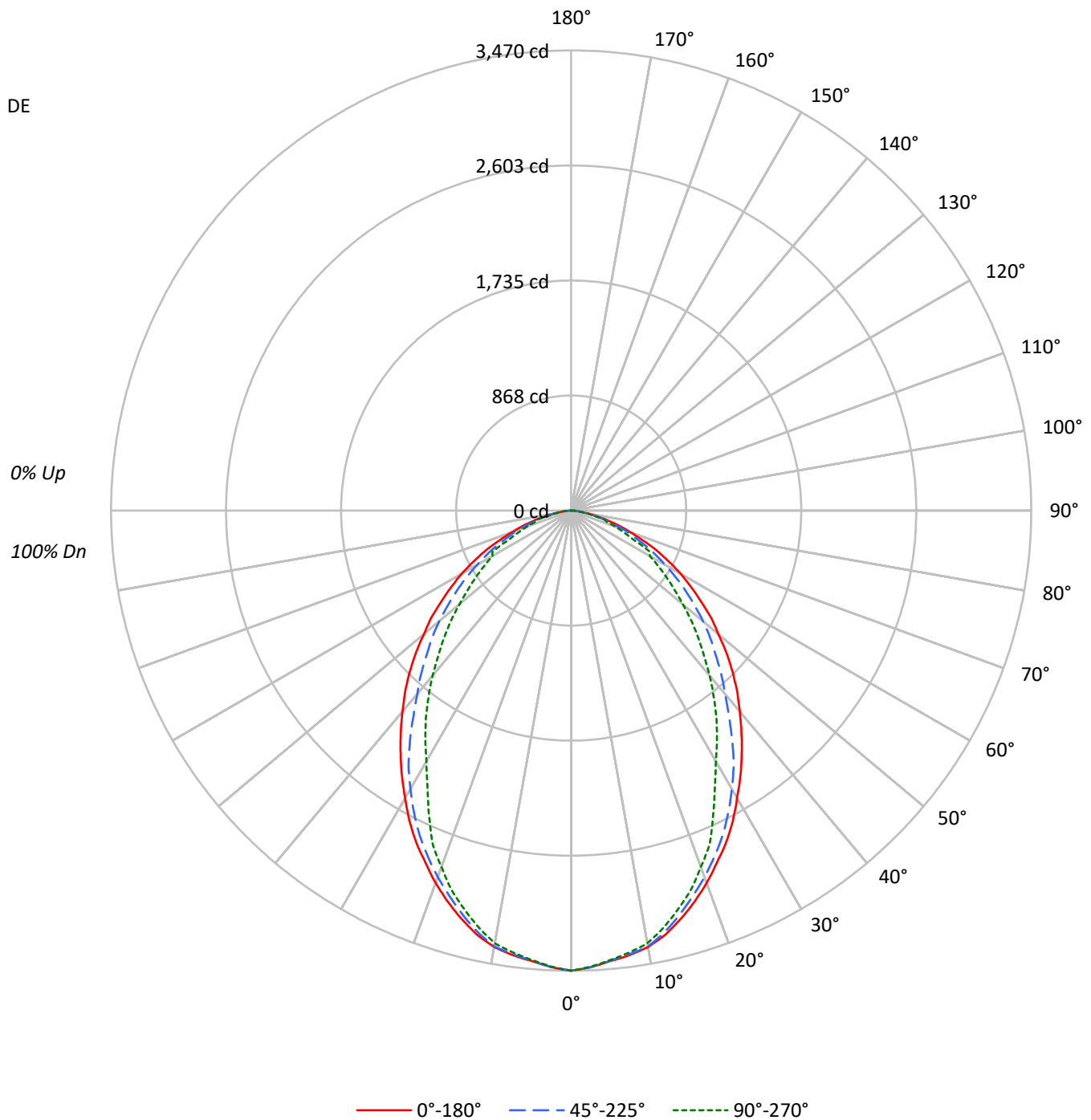
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4669	4669	4669
5°	4605	4600	4594
10°	4565	4560	4527
15°	4442	4398	4336
20°	4279	4210	4095
25°	4103	4014	3764
30°	3889	3764	3391
35°	3683	3479	3136
40°	3474	3171	2854
45°	3275	2931	2580
50°	3031	2721	2301
55°	2804	2465	2061
60°	2569	2202	1846
65°	2260	1928	1635
70°	1862	1688	1389
75°	1481	1293	1355
80°	995	932	870
85°	619	743	868

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3275 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.0	4.7
10°-20°	886.5	13.0
20°-30°	1227.2	18.0
30°-40°	1308.6	19.2
40°-50°	1193.8	17.5
50°-60°	935.3	13.7
60°-70°	609.6	8.9
70°-80°	270.1	4.0
80°-90°	58.0	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°	2436.7	35.8
0°-40°	3745.3	55.0
0°-60°	5874.4	86.2
0°-90°	6812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6812.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3470	3470	3470	3470	3470	
5°	3410	3406	3406	3402	3402	324
15°	3189	3189	3157	3125	3113	897
25°	2764	2748	2704	2608	2535	1269
35°	2242	2226	2118	1958	1910	1402
45°	1721	1685	1540	1412	1356	1326
55°	1195	1159	1051	927	878	1072
65°	710	670	606	618	514	700
75°	285	265	249	237	261	305
85°	40	44	48	52	56	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3469.9	3469.9	3469.9	3469.9	3469.9
2.5°	3445.9	3445.9	3445.9	3441.9	3441.9
5°	3409.8	3405.8	3405.8	3401.7	3401.7
7.5°	3381.7	3377.7	3373.7	3369.7	3361.6
10°	3341.6	3341.6	3337.6	3317.5	3313.5
12.5°	3277.4	3273.4	3257.3	3229.3	3221.2
15°	3189.1	3189.1	3157.0	3125.0	3112.9
17.5°	3092.9	3088.8	3048.7	3016.6	3000.6
20°	2988.6	2980.5	2940.4	2888.3	2860.2
22.5°	2872.2	2872.2	2824.1	2755.9	2727.8
25°	2763.9	2747.9	2703.7	2607.5	2535.3
27.5°	2639.6	2615.5	2567.4	2431.0	2346.7
30°	2503.2	2491.1	2422.9	2246.4	2182.3
32.5°	2374.8	2354.7	2282.5	2098.0	2045.9
35°	2242.4	2226.4	2118.1	1957.6	1909.5
37.5°	2110.0	2090.0	1953.6	1825.2	1765.1
40°	1977.7	1953.6	1805.2	1688.8	1624.7
42.5°	1853.3	1821.2	1676.8	1552.4	1480.2
45°	1720.9	1684.8	1540.4	1412.0	1355.9
47.5°	1588.6	1556.5	1424.1	1291.7	1227.5
50°	1448.1	1420.1	1299.7	1167.3	1099.1
52.5°	1331.8	1287.7	1171.4	1039.0	982.8
55°	1195.4	1159.3	1051.0	926.7	878.5
57.5°	1071.1	1035.0	934.7	818.3	778.2
60°	954.7	902.6	818.3	718.1	686.0
62.5°	826.4	786.3	714.0	629.8	669.9
65°	710.0	669.9	605.7	617.8	513.5
67.5°	581.7	561.6	505.4	449.3	433.2
70°	473.4	449.3	429.2	369.1	353.0
72.5°	377.1	353.0	324.9	292.8	280.8
75°	284.8	264.8	248.7	236.7	260.7
77.5°	196.6	188.5	176.5	164.5	160.5
80°	128.4	124.4	120.3	116.3	112.3
82.5°	76.2	76.2	76.2	76.2	76.2
85°	40.1	44.1	48.1	52.1	56.2
87.5°	24.1	24.1	28.1	32.1	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)