

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: P563344

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563344
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-40-UNV-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6899.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

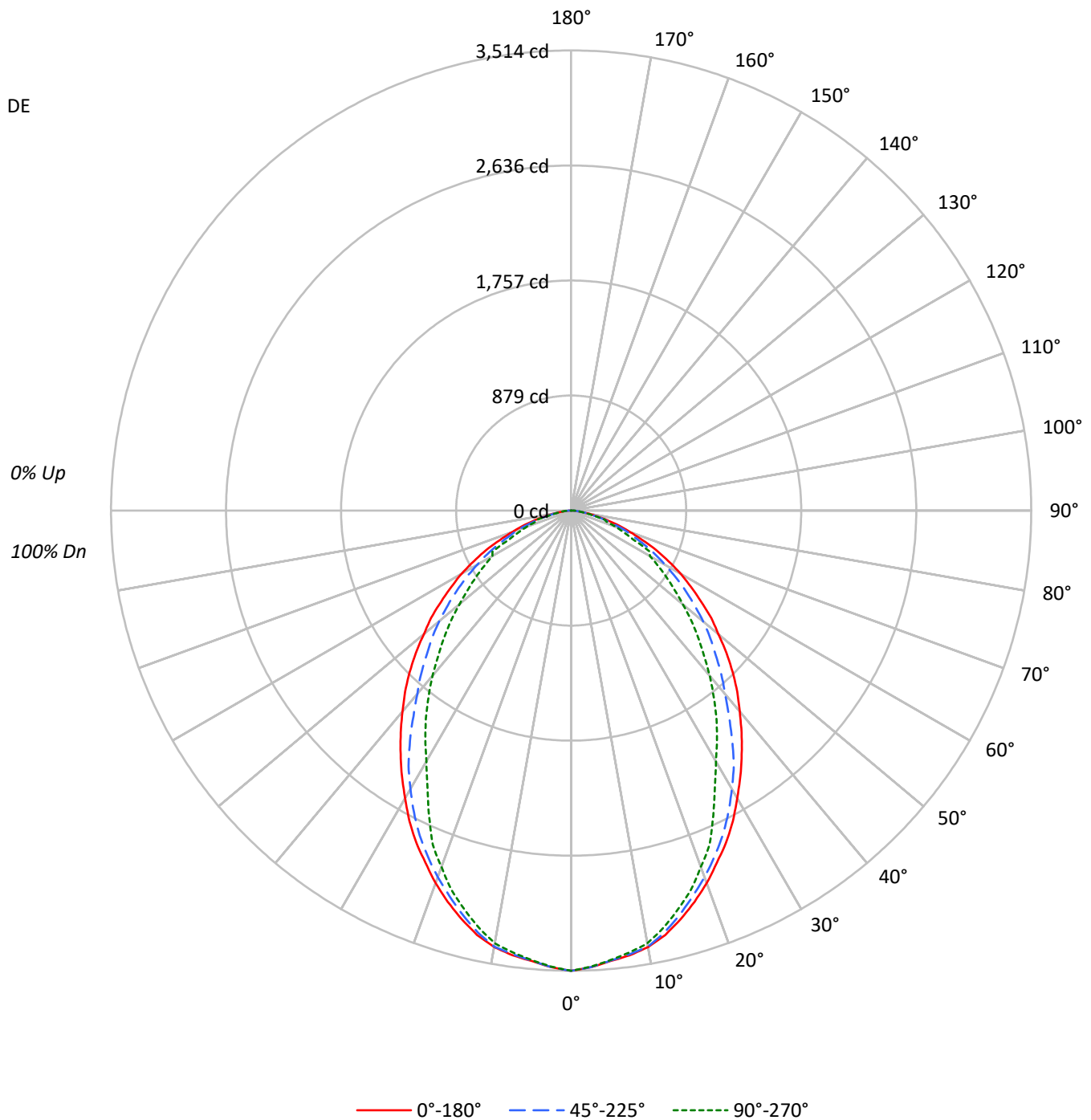
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4728	4728	4728
5°	4664	4659	4653
10°	4624	4618	4585
15°	4499	4454	4392
20°	4334	4264	4148
25°	4156	4065	3812
30°	3939	3812	3434
35°	3730	3523	3177
40°	3518	3211	2890
45°	3316	2969	2613
50°	3070	2755	2330
55°	2840	2497	2087
60°	2602	2230	1869
65°	2289	1953	1656
70°	1886	1710	1406
75°	1500	1310	1373
80°	1007	945	882
85°	627	753	878

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.1	4.7
10°-20°	897.8	13.0
20°-30°	1242.9	18.0
30°-40°	1325.3	19.2
40°-50°	1209.1	17.5
50°-60°	947.2	13.7
60°-70°	617.3	8.9
70°-80°	273.5	4.0
80°-90°	58.7	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°	2467.8	35.8
0°-40°	3793.1	55.0
0°-60°	5949.4	86.2
0°-90°	6899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3514	3514	3514	3514	3514	
5°	3453	3449	3449	3445	3445	328
15°	3230	3230	3197	3165	3153	908
25°	2799	2783	2738	2641	2568	1285
35°	2271	2255	2145	1983	1934	1420
45°	1743	1706	1560	1430	1373	1343
55°	1211	1174	1064	938	890	1086
65°	719	678	614	626	520	709
75°	288	268	252	240	264	309
85°	41	45	49	53	57	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3514.3	3514.3	3514.3	3514.3	3514.3
2.5°	3489.9	3489.9	3489.9	3485.8	3485.8
5°	3453.3	3449.3	3449.3	3445.2	3445.2
7.5°	3424.9	3420.8	3416.8	3412.7	3404.6
10°	3384.3	3384.3	3380.2	3359.9	3355.8
12.5°	3319.2	3315.2	3298.9	3270.5	3262.4
15°	3229.9	3229.9	3197.4	3164.9	3152.7
17.5°	3132.4	3128.3	3087.7	3055.2	3038.9
20°	3026.7	3018.6	2978.0	2925.2	2896.7
22.5°	2908.9	2908.9	2860.2	2791.1	2762.7
25°	2799.2	2783.0	2738.3	2640.8	2567.6
27.5°	2673.3	2648.9	2600.1	2462.0	2376.7
30°	2535.1	2523.0	2453.9	2275.1	2210.1
32.5°	2405.1	2384.8	2311.7	2124.8	2072.0
35°	2271.1	2254.8	2145.1	1982.6	1933.9
37.5°	2137.0	2116.7	1978.5	1848.5	1787.6
40°	2002.9	1978.5	1828.2	1710.4	1645.4
42.5°	1877.0	1844.5	1698.2	1572.3	1499.1
45°	1742.9	1706.3	1560.1	1430.1	1373.2
47.5°	1608.8	1576.3	1442.3	1308.2	1243.2
50°	1466.6	1438.2	1316.3	1182.3	1113.2
52.5°	1348.8	1304.1	1186.3	1052.2	995.4
55°	1210.7	1174.1	1064.4	938.5	889.7
57.5°	1084.7	1048.2	946.6	828.8	788.2
60°	966.9	914.1	828.8	727.2	694.7
62.5°	836.9	796.3	723.2	637.8	678.5
65°	719.1	678.5	613.5	625.7	520.0
67.5°	589.1	568.8	511.9	455.0	438.8
70°	479.4	455.0	434.7	373.8	357.5
72.5°	381.9	357.5	329.1	296.6	284.4
75°	288.5	268.1	251.9	239.7	264.1
77.5°	199.1	190.9	178.8	166.6	162.5
80°	130.0	125.9	121.9	117.8	113.8
82.5°	77.2	77.2	77.2	77.2	77.2
85°	40.6	44.7	48.8	52.8	56.9
87.5°	24.4	24.4	28.4	32.5	36.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)