

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: P563273

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563273
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-35-UNV-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7012.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

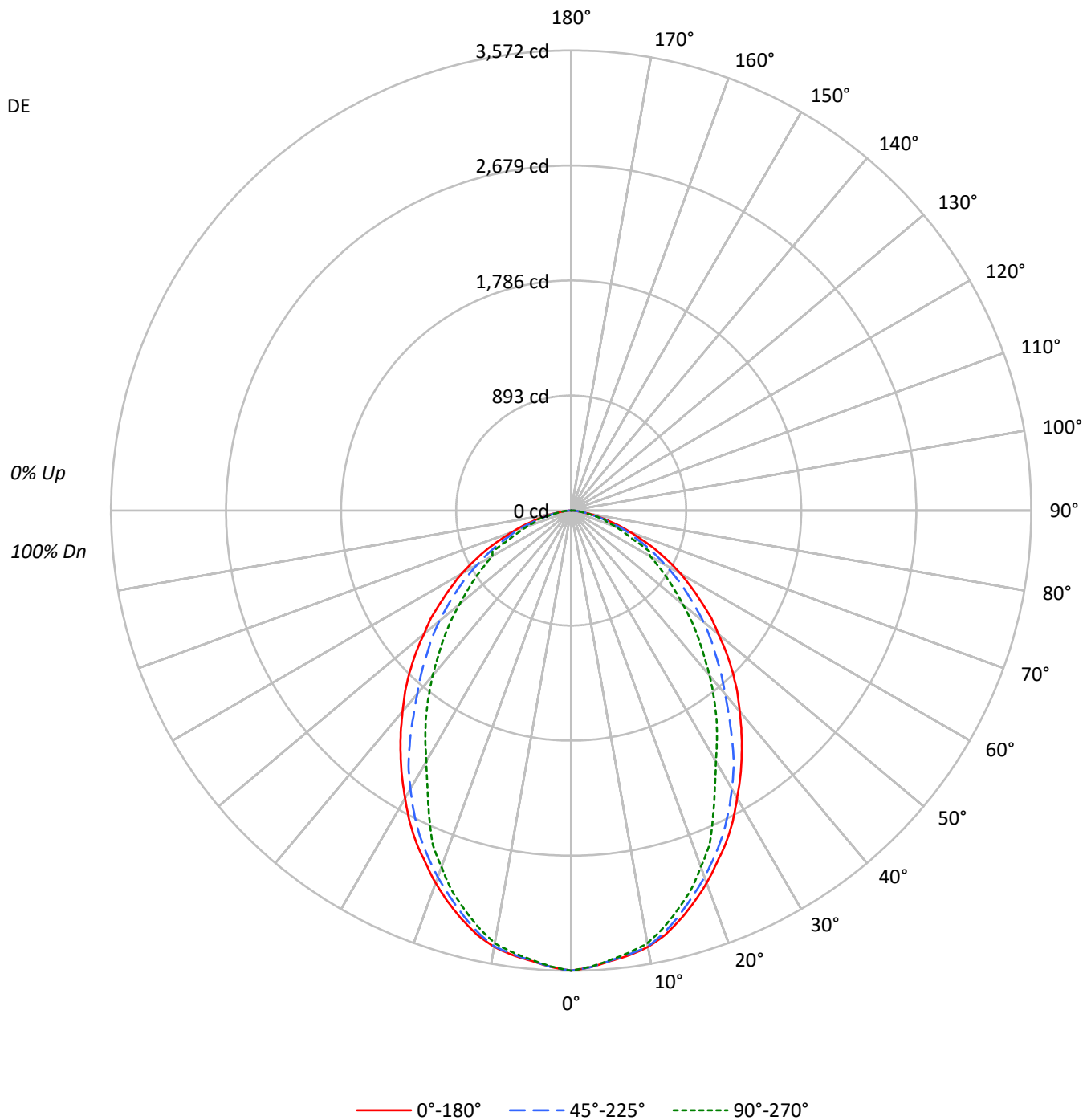
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	4806	4806	4806
5°	4741	4735	4729
10°	4699	4694	4660
15°	4573	4527	4463
20°	4405	4334	4216
25°	4224	4132	3874
30°	4003	3875	3490
35°	3791	3581	3228
40°	3576	3264	2937
45°	3371	3017	2656
50°	3120	2801	2368
55°	2886	2538	2121
60°	2645	2267	1900
65°	2327	1985	1683
70°	1917	1738	1430
75°	1524	1331	1395
80°	1024	960	896
85°	638	766	892

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	332.5	4.7
10°-20°	912.5	13.0
20°-30°	1263.3	18.0
30°-40°	1347.0	19.2
40°-50°	1228.9	17.5
50°-60°	962.7	13.7
60°-70°	627.5	8.9
70°-80°	278.0	4.0
80°-90°	59.7	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°	2508.3	35.8
0°-40°	3855.3	55.0
0°-60°	6046.9	86.2
0°-90°	7012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3572	3572	3572	3572	3572	
5°	3510	3506	3506	3502	3502	333
15°	3283	3283	3250	3217	3204	923
25°	2845	2829	2783	2684	2610	1306
35°	2308	2292	2180	2015	1966	1443
45°	1772	1734	1586	1454	1396	1365
55°	1230	1193	1082	954	904	1104
65°	731	690	624	636	528	720
75°	293	272	256	244	268	314
85°	41	45	50	54	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3571.8	3571.8	3571.8	3571.8	3571.8
2.5°	3547.0	3547.0	3547.0	3542.9	3542.9
5°	3509.9	3505.8	3505.8	3501.6	3501.6
7.5°	3481.0	3476.8	3472.7	3468.6	3460.3
10°	3439.7	3439.7	3435.6	3414.9	3410.8
12.5°	3373.6	3369.5	3353.0	3324.1	3315.8
15°	3282.8	3282.8	3249.7	3216.7	3204.3
17.5°	3183.7	3179.5	3138.2	3105.2	3088.7
20°	3076.3	3068.0	3026.8	2973.1	2944.2
22.5°	2956.6	2956.6	2907.0	2836.8	2807.9
25°	2845.1	2828.6	2783.1	2684.0	2609.7
27.5°	2717.1	2692.3	2642.7	2502.3	2415.6
30°	2576.7	2564.3	2494.1	2312.4	2246.3
32.5°	2444.5	2423.9	2349.6	2159.6	2105.9
35°	2308.3	2291.7	2180.3	2015.1	1965.5
37.5°	2172.0	2151.4	2011.0	1878.8	1816.9
40°	2035.7	2011.0	1858.2	1738.4	1672.4
42.5°	1907.7	1874.7	1726.0	1598.0	1523.7
45°	1771.5	1734.3	1585.6	1453.5	1395.7
47.5°	1635.2	1602.2	1465.9	1329.6	1263.6
50°	1490.7	1461.8	1337.9	1201.6	1131.4
52.5°	1370.9	1325.5	1205.7	1069.5	1011.7
55°	1230.5	1193.4	1081.9	953.9	904.3
57.5°	1102.5	1065.4	962.1	842.4	801.1
60°	982.8	929.1	842.4	739.1	706.1
62.5°	850.6	809.3	735.0	648.3	689.6
65°	730.9	689.6	623.5	635.9	528.5
67.5°	598.7	578.1	520.3	462.5	446.0
70°	487.3	462.5	441.8	379.9	363.4
72.5°	388.2	363.4	334.5	301.4	289.0
75°	293.2	272.5	256.0	243.6	268.4
77.5°	202.3	194.1	181.7	169.3	165.2
80°	132.1	128.0	123.9	119.7	115.6
82.5°	78.5	78.5	78.5	78.5	78.5
85°	41.3	45.4	49.6	53.7	57.8
87.5°	24.8	24.8	28.9	33.0	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)