

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: P563016

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563016
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-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5594.0 lumens
Efficiency: N/A
Efficacy: 84.0 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

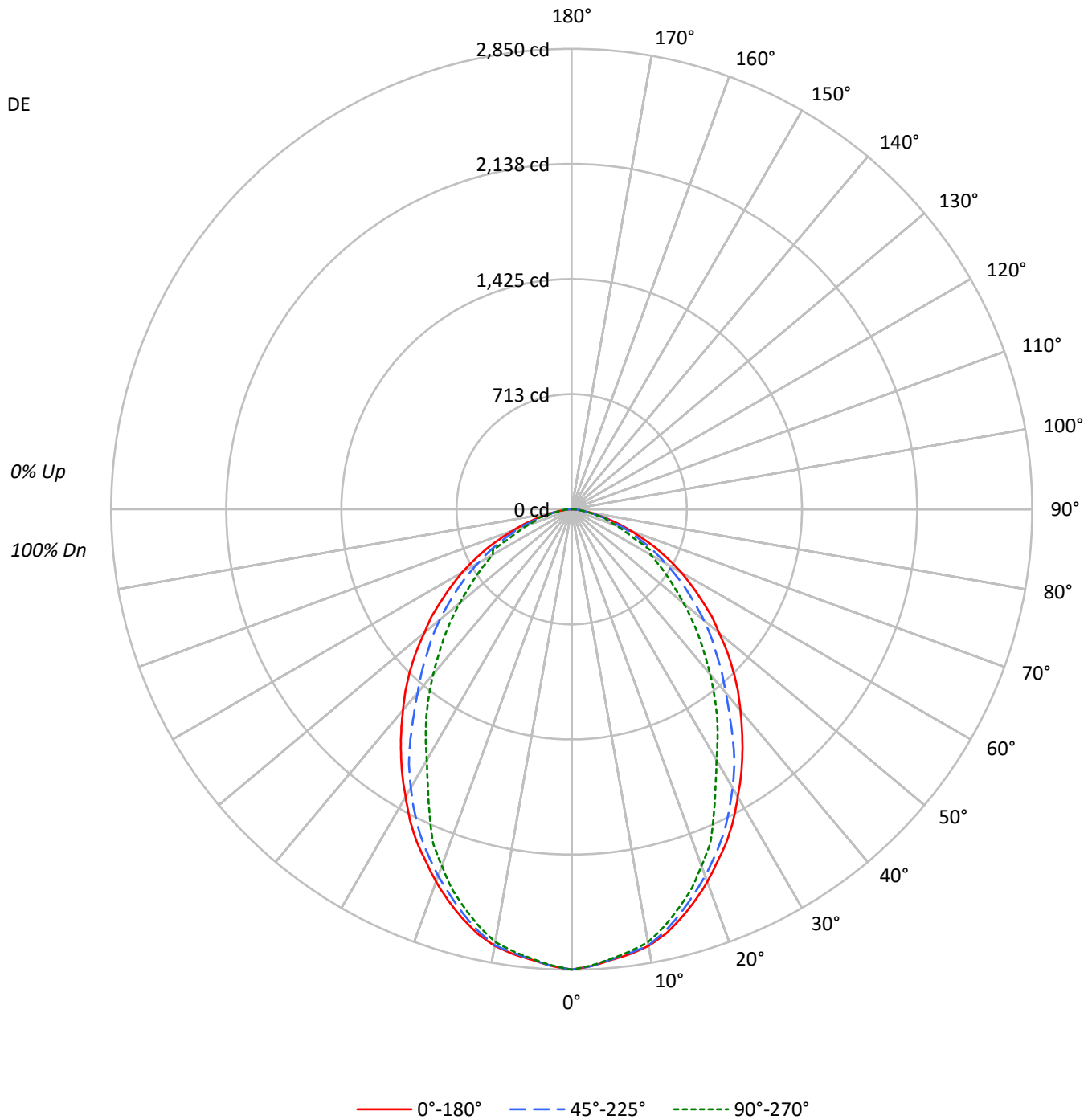
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	3834	3834	3834
5°	3782	3777	3773
10°	3749	3745	3718
15°	3648	3611	3561
20°	3514	3457	3363
25°	3370	3296	3091
30°	3194	3091	2784
35°	3025	2857	2576
40°	2853	2604	2343
45°	2689	2407	2119
50°	2489	2234	1889
55°	2303	2025	1692
60°	2110	1808	1516
65°	1856	1584	1343
70°	1529	1387	1140
75°	1216	1062	1113
80°	817	766	714
85°	508	610	712

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2689 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.2	4.7
10°-20°	728.0	13.0
20°-30°	1007.8	18.0
30°-40°	1074.6	19.2
40°-50°	980.4	17.5
50°-60°	768.0	13.7
60°-70°	500.6	8.9
70°-80°	221.8	4.0
80°-90°	47.6	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°	2001.0	35.8
0°-40°	3075.6	55.0
0°-60°	4824.1	86.2
0°-90°	5594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2850	2850	2850	2850	2850	
5°	2800	2797	2797	2794	2794	266
15°	2619	2619	2593	2566	2556	736
25°	2270	2256	2220	2141	2082	1042
35°	1842	1828	1739	1608	1568	1151
45°	1413	1384	1265	1160	1113	1089
55°	982	952	863	761	721	881
65°	583	550	497	507	422	575
75°	234	217	204	194	214	251
85°	33	36	40	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2849.5	2849.5	2849.5	2849.5	2849.5
2.5°	2829.7	2829.7	2829.7	2826.4	2826.4
5°	2800.1	2796.8	2796.8	2793.5	2793.5
7.5°	2777.0	2773.7	2770.4	2767.2	2760.6
10°	2744.1	2744.1	2740.8	2724.3	2721.0
12.5°	2691.4	2688.1	2674.9	2651.9	2645.3
15°	2618.9	2618.9	2592.6	2566.2	2556.3
17.5°	2539.9	2536.6	2503.6	2477.3	2464.1
20°	2454.2	2447.6	2414.7	2371.8	2348.8
22.5°	2358.7	2358.7	2319.1	2263.1	2240.1
25°	2269.7	2256.5	2220.3	2141.2	2082.0
27.5°	2167.6	2147.8	2108.3	1996.3	1927.1
30°	2055.6	2045.7	1989.7	1844.8	1792.1
32.5°	1950.2	1933.7	1874.4	1722.9	1680.1
35°	1841.5	1828.3	1739.4	1607.6	1568.1
37.5°	1732.8	1716.3	1604.3	1498.9	1449.5
40°	1624.1	1604.3	1482.4	1386.9	1334.2
42.5°	1521.9	1495.6	1377.0	1274.9	1215.6
45°	1413.2	1383.6	1265.0	1159.6	1113.4
47.5°	1304.5	1278.2	1169.5	1060.7	1008.0
50°	1189.2	1166.2	1067.3	958.6	902.6
52.5°	1093.7	1057.4	961.9	853.2	807.1
55°	981.7	952.0	863.1	761.0	721.4
57.5°	879.6	849.9	767.6	672.0	639.1
60°	784.0	741.2	672.0	589.7	563.3
62.5°	678.6	645.7	586.4	517.2	550.1
65°	583.1	550.1	497.4	507.3	421.7
67.5°	477.7	461.2	415.1	369.0	355.8
70°	388.7	369.0	352.5	303.1	289.9
72.5°	309.7	289.9	266.8	240.5	230.6
75°	233.9	217.4	204.2	194.4	214.1
77.5°	161.4	154.8	144.9	135.1	131.8
80°	105.4	102.1	98.8	95.5	92.2
82.5°	62.6	62.6	62.6	62.6	62.6
85°	32.9	36.2	39.5	42.8	46.1
87.5°	19.8	19.8	23.1	26.4	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)