

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: P562582

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562582
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-LD4-2HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7084.0 lumens
Efficiency: N/A
Efficacy: 82.0 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

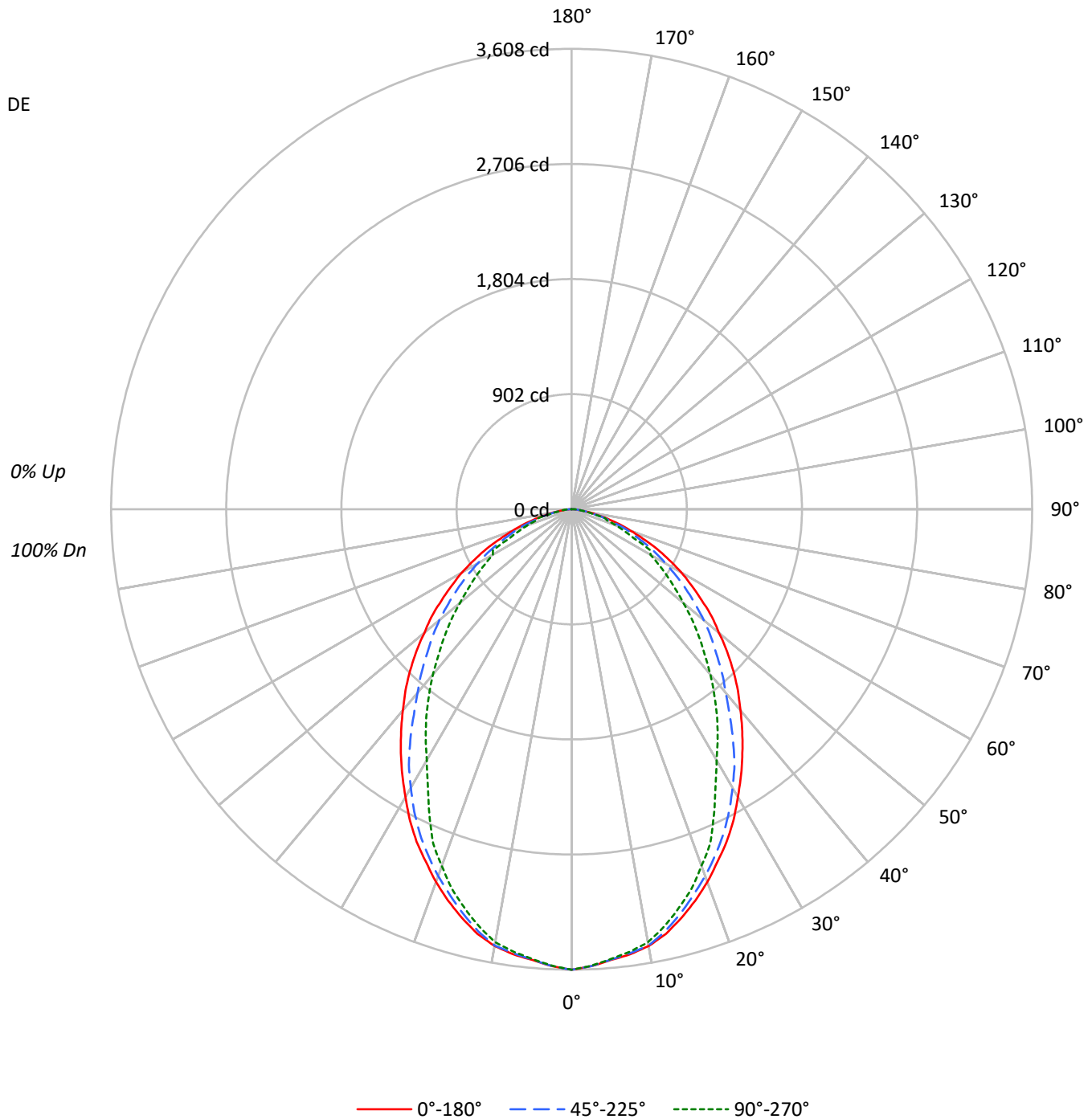
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4855	4855	4855
5°	4789	4784	4778
10°	4748	4742	4708
15°	4620	4573	4509
20°	4450	4378	4259
25°	4267	4174	3914
30°	4044	3915	3526
35°	3830	3618	3262
40°	3612	3297	2967
45°	3405	3048	2683
50°	3152	2829	2393
55°	2916	2564	2143
60°	2672	2290	1920
65°	2351	2005	1700
70°	1937	1756	1444
75°	1540	1344	1410
80°	1034	970	905
85°	644	773	902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	335.9	4.7
10°-20°	921.9	13.0
20°-30°	1276.2	18.0
30°-40°	1360.9	19.2
40°-50°	1241.5	17.5
50°-60°	972.6	13.7
60°-70°	633.9	8.9
70°-80°	280.8	4.0
80°-90°	60.3	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°	2534.0	35.8
0°-40°	3894.9	55.0
0°-60°	6109.0	86.2
0°-90°	7084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7084.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3608	3608	3608	3608	3608	
5°	3546	3542	3542	3538	3538	337
15°	3316	3316	3283	3250	3237	932
25°	2874	2858	2812	2712	2636	1320
35°	2332	2315	2203	2036	1986	1458
45°	1790	1752	1602	1468	1410	1379
55°	1243	1206	1093	964	914	1115
65°	738	697	630	642	534	728
75°	296	275	259	246	271	317
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3608.5	3608.5	3608.5	3608.5	3608.5
2.5°	3583.5	3583.5	3583.5	3579.3	3579.3
5°	3545.9	3541.7	3541.7	3537.6	3537.6
7.5°	3516.7	3512.5	3508.4	3504.2	3495.9
10°	3475.0	3475.0	3470.8	3450.0	3445.8
12.5°	3408.3	3404.1	3387.4	3358.2	3349.9
15°	3316.5	3316.5	3283.1	3249.7	3237.2
17.5°	3216.4	3212.2	3170.5	3137.1	3120.4
20°	3107.9	3099.6	3057.8	3003.6	2974.4
22.5°	2986.9	2986.9	2936.9	2865.9	2836.7
25°	2874.3	2857.6	2811.7	2711.6	2636.5
27.5°	2745.0	2719.9	2669.9	2528.0	2440.4
30°	2603.1	2590.6	2519.7	2336.1	2269.4
32.5°	2469.6	2448.8	2373.7	2181.8	2127.6
35°	2332.0	2315.3	2202.6	2035.8	1985.7
37.5°	2194.3	2173.4	2031.6	1898.1	1835.5
40°	2056.6	2031.6	1877.3	1756.3	1689.5
42.5°	1927.3	1893.9	1743.8	1614.4	1539.3
45°	1789.6	1752.1	1601.9	1468.4	1410.0
47.5°	1652.0	1618.6	1480.9	1343.3	1276.5
50°	1506.0	1476.8	1351.6	1214.0	1143.0
52.5°	1385.0	1339.1	1218.1	1080.5	1022.1
55°	1243.2	1205.6	1093.0	963.7	913.6
57.5°	1113.8	1076.3	972.0	851.0	809.3
60°	992.9	938.6	851.0	746.7	713.4
62.5°	859.4	817.6	742.6	655.0	696.7
65°	738.4	696.7	629.9	642.4	534.0
67.5°	604.9	584.0	525.6	467.2	450.5
70°	492.3	467.2	446.4	383.8	367.1
72.5°	392.1	367.1	337.9	304.5	292.0
75°	296.2	275.3	258.6	246.1	271.2
77.5°	204.4	196.1	183.6	171.0	166.9
80°	133.5	129.3	125.2	121.0	116.8
82.5°	79.3	79.3	79.3	79.3	79.3
85°	41.7	45.9	50.1	54.2	58.4
87.5°	25.0	25.0	29.2	33.4	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)