

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: P561366

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561366
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-12-4-LD4-2HI-35-UNV-82-87-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5945.0 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

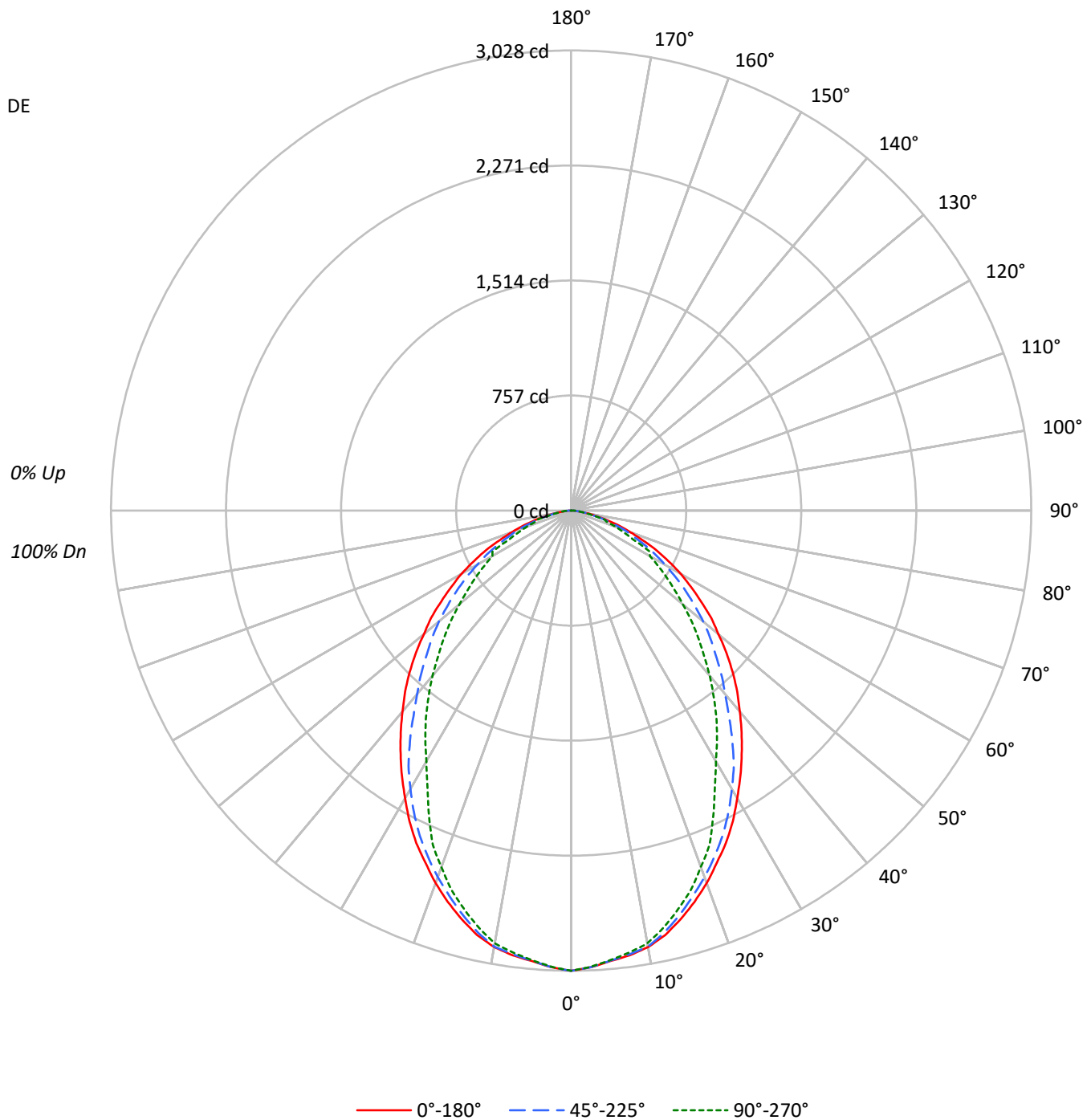
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8149	8149	8149
5°	8038	8029	8019
10°	7969	7959	7902
15°	7754	7676	7568
20°	7469	7349	7148
25°	7162	7006	6570
30°	6788	6571	5918
35°	6429	6072	5474
40°	6063	5534	4981
45°	5716	5116	4503
50°	5291	4749	4016
55°	4895	4303	3597
60°	4484	3844	3222
65°	3946	3366	2853
70°	3250	2947	2424
75°	2585	2257	2366
80°	1736	1627	1519
85°	1081	1297	1513

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5716 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.9	4.7
10°-20°	773.6	13.0
20°-30°	1071.0	18.0
30°-40°	1142.0	19.2
40°-50°	1041.9	17.5
50°-60°	816.2	13.7
60°-70°	532.0	8.9
70°-80°	235.7	4.0
80°-90°	50.6	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°	2126.6	35.8
0°-40°	3268.6	55.0
0°-60°	5126.7	86.2
0°-90°	5945.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5945.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3028	3028	3028	3028	3028	
5°	2976	2972	2972	2969	2969	282
15°	2783	2783	2755	2727	2717	782
25°	2412	2398	2360	2276	2213	1107
35°	1957	1943	1848	1708	1666	1223
45°	1502	1470	1344	1232	1183	1157
55°	1043	1012	917	809	767	936
65°	620	585	529	539	448	611
75°	249	231	217	207	228	266
85°	35	38	42	46	49	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3028.3	3028.3	3028.3	3028.3	3028.3
2.5°	3007.3	3007.3	3007.3	3003.8	3003.8
5°	2975.8	2972.3	2972.3	2968.8	2968.8
7.5°	2951.3	2947.8	2944.3	2940.8	2933.8
10°	2916.3	2916.3	2912.8	2895.3	2891.8
12.5°	2860.3	2856.8	2842.8	2818.2	2811.2
15°	2783.2	2783.2	2755.2	2727.2	2716.7
17.5°	2699.2	2695.7	2660.7	2632.7	2618.7
20°	2608.2	2601.2	2566.2	2520.7	2496.2
22.5°	2506.7	2506.7	2464.7	2405.1	2380.6
25°	2412.1	2398.1	2359.6	2275.6	2212.6
27.5°	2303.6	2282.6	2240.6	2121.6	2048.0
30°	2184.6	2174.1	2114.6	1960.5	1904.5
32.5°	2072.5	2055.0	1992.0	1831.0	1785.5
35°	1957.0	1943.0	1848.5	1708.5	1666.4
37.5°	1841.5	1824.0	1705.0	1592.9	1540.4
40°	1726.0	1705.0	1575.4	1473.9	1417.9
42.5°	1617.4	1589.4	1463.4	1354.9	1291.8
45°	1501.9	1470.4	1344.4	1232.3	1183.3
47.5°	1386.4	1358.4	1242.8	1127.3	1071.3
50°	1263.8	1239.3	1134.3	1018.8	959.3
52.5°	1162.3	1123.8	1022.3	906.7	857.7
55°	1043.3	1011.8	917.2	808.7	766.7
57.5°	934.7	903.2	815.7	714.2	679.2
60°	833.2	787.7	714.2	626.7	598.7
62.5°	721.2	686.2	623.2	549.6	584.7
65°	619.7	584.7	528.6	539.1	448.1
67.5°	507.6	490.1	441.1	392.1	378.1
70°	413.1	392.1	374.6	322.1	308.1
72.5°	329.1	308.1	283.6	255.6	245.1
75°	248.6	231.1	217.1	206.6	227.6
77.5°	171.5	164.5	154.0	143.5	140.0
80°	112.0	108.5	105.0	101.5	98.0
82.5°	66.5	66.5	66.5	66.5	66.5
85°	35.0	38.5	42.0	45.5	49.0
87.5°	21.0	21.0	24.5	28.0	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)