

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: P564053

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564053
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-LD4-4STD-35-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14068.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

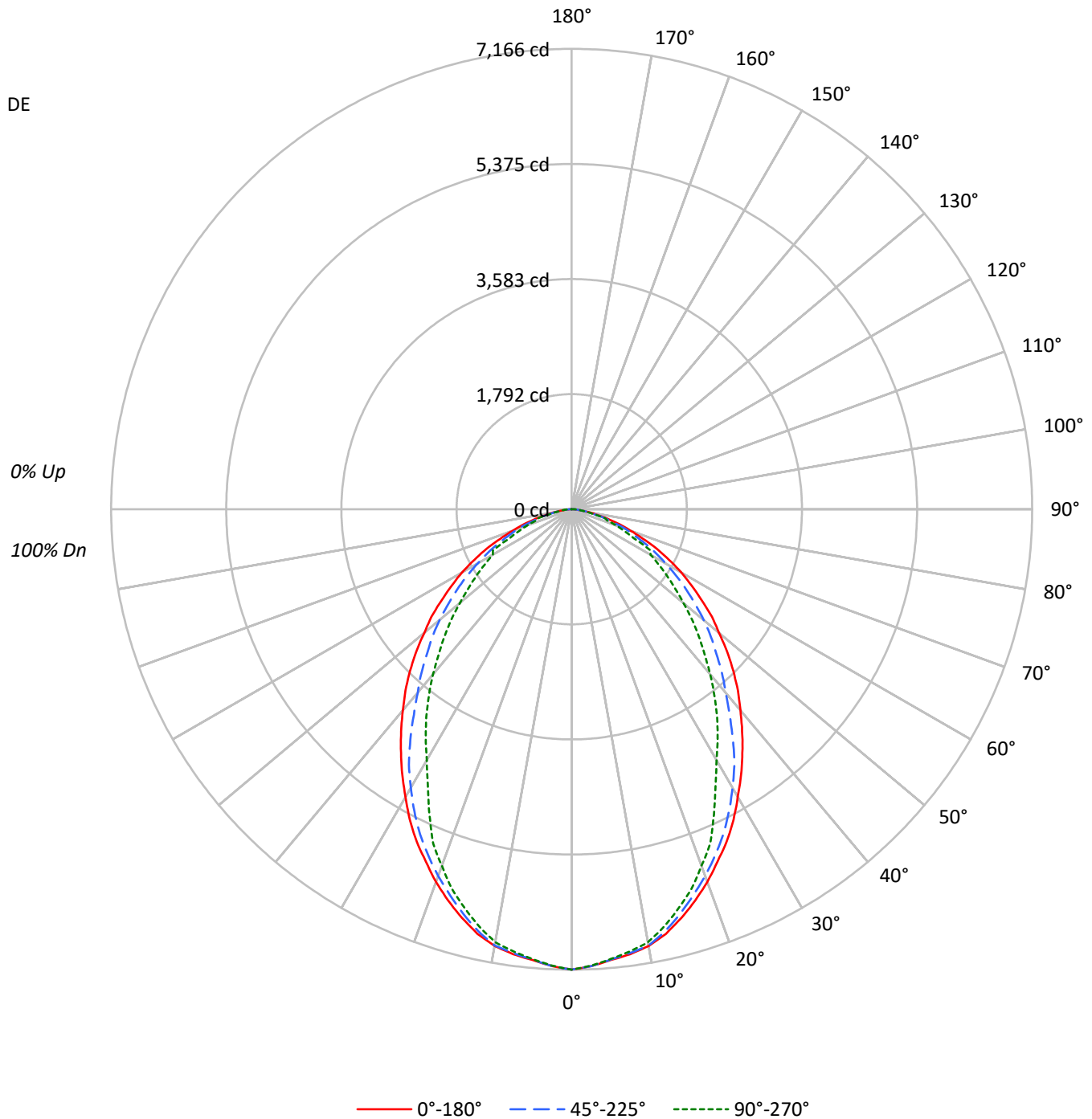
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564053

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P564053

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-82-86-EDD

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	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°	9642	9642	9642
5°	9511	9500	9488
10°	9428	9417	9349
15°	9174	9082	8955
20°	8837	8695	8458
25°	8474	8289	7773
30°	8032	7774	7002
35°	7607	7185	6477
40°	7174	6548	5893
45°	6763	6053	5328
50°	6260	5619	4751
55°	5791	5092	4256
60°	5306	4548	3812
65°	4668	3983	3376
70°	3846	3487	2868
75°	3058	2670	2799
80°	2054	1925	1798
85°	1278	1535	1791

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6763 cd/sqm



TEST NUMBER: P564053

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-82-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	667.1	4.7
10°-20°	1830.7	13.0
20°-30°	2534.5	18.0
30°-40°	2702.5	19.2
40°-50°	2465.5	17.5
50°-60°	1931.5	13.7
60°-70°	1258.9	8.9
70°-80°	557.7	4.0
80°-90°	119.7	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°	5032.2	35.8
0°-40°	7734.7	55.0
0°-60°	12131.7	86.2
0°-90°	14068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14068.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7166	7166	7166	7166	7166	
5°	7042	7034	7034	7025	7025	668
15°	6586	6586	6520	6454	6429	1852
25°	5708	5675	5584	5385	5236	2621
35°	4631	4598	4374	4043	3943	2895
45°	3554	3480	3181	2916	2800	2738
55°	2469	2394	2170	1914	1814	2214
65°	1466	1384	1251	1276	1060	1445
75°	588	547	514	489	538	630
85°	83	91	99	108	116	115
90°	0	0	0	0	0	



TEST NUMBER: P564053

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7166.1	7166.1	7166.1	7166.1	7166.1
2.5°	7116.3	7116.3	7116.3	7108.1	7108.1
5°	7041.8	7033.5	7033.5	7025.2	7025.2
7.5°	6983.8	6975.5	6967.2	6958.9	6942.4
10°	6900.9	6900.9	6892.7	6851.2	6843.0
12.5°	6768.4	6760.1	6727.0	6669.0	6652.4
15°	6586.1	6586.1	6519.9	6453.6	6428.7
17.5°	6387.3	6379.0	6296.2	6229.9	6196.8
20°	6171.9	6155.3	6072.5	5964.8	5906.8
22.5°	5931.7	5931.7	5832.3	5691.4	5633.4
25°	5708.0	5674.8	5583.7	5384.9	5235.8
27.5°	5451.2	5401.5	5302.0	5020.4	4846.4
30°	5169.5	5144.6	5003.8	4639.3	4506.7
32.5°	4904.4	4863.0	4713.9	4332.8	4225.1
35°	4631.0	4597.9	4374.2	4042.8	3943.4
37.5°	4357.6	4316.2	4034.5	3769.4	3645.2
40°	4084.2	4034.5	3728.0	3487.8	3355.2
42.5°	3827.4	3761.1	3462.9	3206.1	3057.0
45°	3554.0	3479.5	3181.2	2916.1	2800.1
47.5°	3280.6	3214.4	2941.0	2667.6	2535.0
50°	2990.7	2932.7	2684.2	2410.8	2269.9
52.5°	2750.4	2659.3	2419.1	2145.7	2029.7
55°	2468.8	2394.2	2170.5	1913.7	1814.3
57.5°	2211.9	2137.4	1930.3	1690.0	1607.2
60°	1971.7	1864.0	1690.0	1482.9	1416.6
62.5°	1706.6	1623.8	1474.6	1300.7	1383.5
65°	1466.3	1383.5	1251.0	1275.8	1060.4
67.5°	1201.2	1159.8	1043.8	927.9	894.7
70°	977.6	927.9	886.4	762.2	729.0
72.5°	778.7	729.0	671.0	604.8	579.9
75°	588.2	546.8	513.6	488.8	538.5
77.5°	405.9	389.4	364.5	339.7	331.4
80°	265.1	256.8	248.5	240.2	232.0
82.5°	157.4	157.4	157.4	157.4	157.4
85°	82.8	91.1	99.4	107.7	116.0
87.5°	49.7	49.7	58.0	66.3	74.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)