

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: P564065

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564065
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-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15641.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

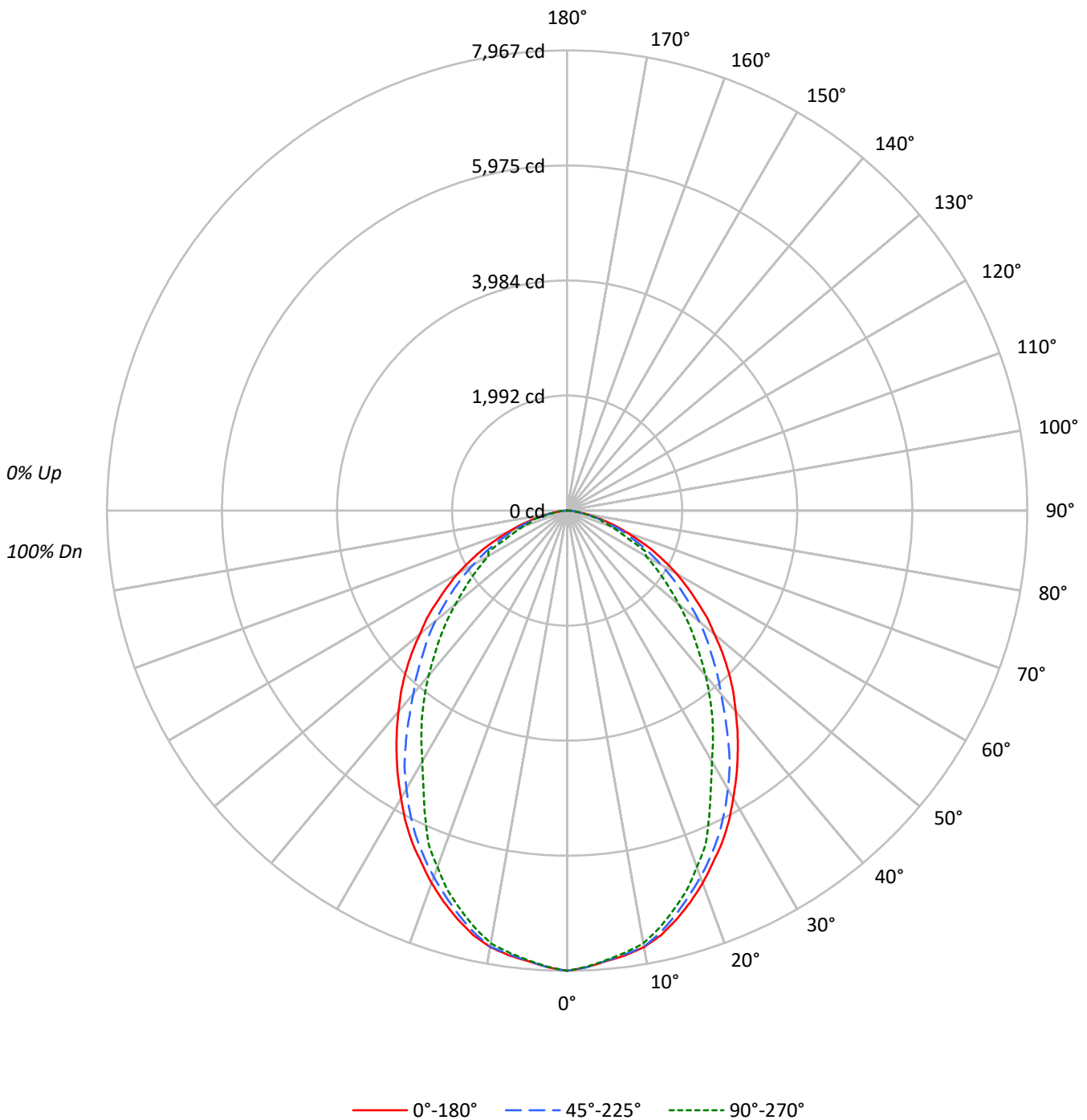
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564065

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P564065

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-93-84-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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10720	10720	10720
5°	10574	10562	10549
10°	10483	10470	10395
15°	10200	10097	9956
20°	9825	9667	9403
25°	9421	9216	8642
30°	8930	8643	7785
35°	8457	7988	7201
40°	7976	7280	6552
45°	7519	6730	5924
50°	6960	6247	5283
55°	6439	5661	4732
60°	5899	5056	4238
65°	5190	4428	3754
70°	4276	3877	3188
75°	3400	2969	3112
80°	2283	2141	1998
85°	1422	1706	1991

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7519 cd/sqm



TEST NUMBER: P564065

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	741.6	4.7
10°-20°	2035.4	13.0
20°-30°	2817.9	18.0
30°-40°	3004.7	19.2
40°-50°	2741.1	17.5
50°-60°	2147.5	13.7
60°-70°	1399.6	8.9
70°-80°	620.1	4.0
80°-90°	133.1	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°	5594.9	35.8
0°-40°	8599.6	55.0
0°-60°	13488.2	86.2
0°-90°	15641.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15641.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7967	7967	7967	7967	7967	
5°	7829	7820	7820	7811	7811	743
15°	7323	7323	7249	7175	7148	2059
25°	6346	6309	6208	5987	5821	2914
35°	5149	5112	4863	4495	4384	3219
45°	3951	3868	3537	3242	3113	3044
55°	2745	2662	2413	2128	2017	2462
65°	1630	1538	1391	1418	1179	1607
75°	654	608	571	543	599	701
85°	92	101	110	120	129	128
90°	0	0	0	0	0	

TEST NUMBER: P564065

CATALOG NUMBER: FSR-24-4-LD4-4STD-35-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7967.3	7967.3	7967.3	7967.3	7967.3
2.5°	7912.1	7912.1	7912.1	7902.8	7902.8
5°	7829.2	7819.9	7819.9	7810.7	7810.7
7.5°	7764.7	7755.5	7746.3	7737.0	7718.6
10°	7672.6	7672.6	7663.4	7617.3	7608.1
12.5°	7525.2	7516.0	7479.1	7414.7	7396.2
15°	7322.6	7322.6	7248.9	7175.2	7147.6
17.5°	7101.5	7092.3	7000.2	6926.5	6889.7
20°	6862.0	6843.6	6751.5	6631.8	6567.3
22.5°	6594.9	6594.9	6484.4	6327.8	6263.3
25°	6346.2	6309.4	6208.1	5987.0	5821.2
27.5°	6060.7	6005.4	5894.9	5581.7	5388.3
30°	5747.5	5719.9	5563.3	5158.0	5010.7
32.5°	5452.8	5406.7	5240.9	4817.2	4697.5
35°	5148.8	5112.0	4863.3	4494.9	4384.3
37.5°	4844.9	4798.8	4485.6	4190.9	4052.7
40°	4540.9	4485.6	4144.8	3877.7	3730.4
42.5°	4255.4	4181.7	3850.1	3564.6	3398.8
45°	3951.4	3868.5	3536.9	3242.2	3113.2
47.5°	3647.5	3573.8	3269.8	2965.9	2818.5
50°	3325.1	3260.6	2984.3	2680.3	2523.8
52.5°	3058.0	2956.7	2689.5	2385.6	2256.6
55°	2744.8	2661.9	2413.2	2127.7	2017.2
57.5°	2459.3	2376.4	2146.1	1879.0	1786.9
60°	2192.2	2072.4	1879.0	1648.7	1575.0
62.5°	1897.4	1805.3	1639.5	1446.1	1538.2
65°	1630.3	1538.2	1390.8	1418.5	1179.0
67.5°	1335.6	1289.5	1160.6	1031.6	994.8
70°	1086.9	1031.6	985.6	847.4	810.5
72.5°	865.8	810.5	746.1	672.4	644.8
75°	654.0	607.9	571.1	543.4	598.7
77.5°	451.3	432.9	405.3	377.6	368.4
80°	294.7	285.5	276.3	267.1	257.9
82.5°	175.0	175.0	175.0	175.0	175.0
85°	92.1	101.3	110.5	119.7	129.0
87.5°	55.3	55.3	64.5	73.7	82.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)