

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: P561725

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561725
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-LD4-2STD-35-UNV-80-96-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6585.0 lumens
Efficiency: N/A
Efficacy: 98.9 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

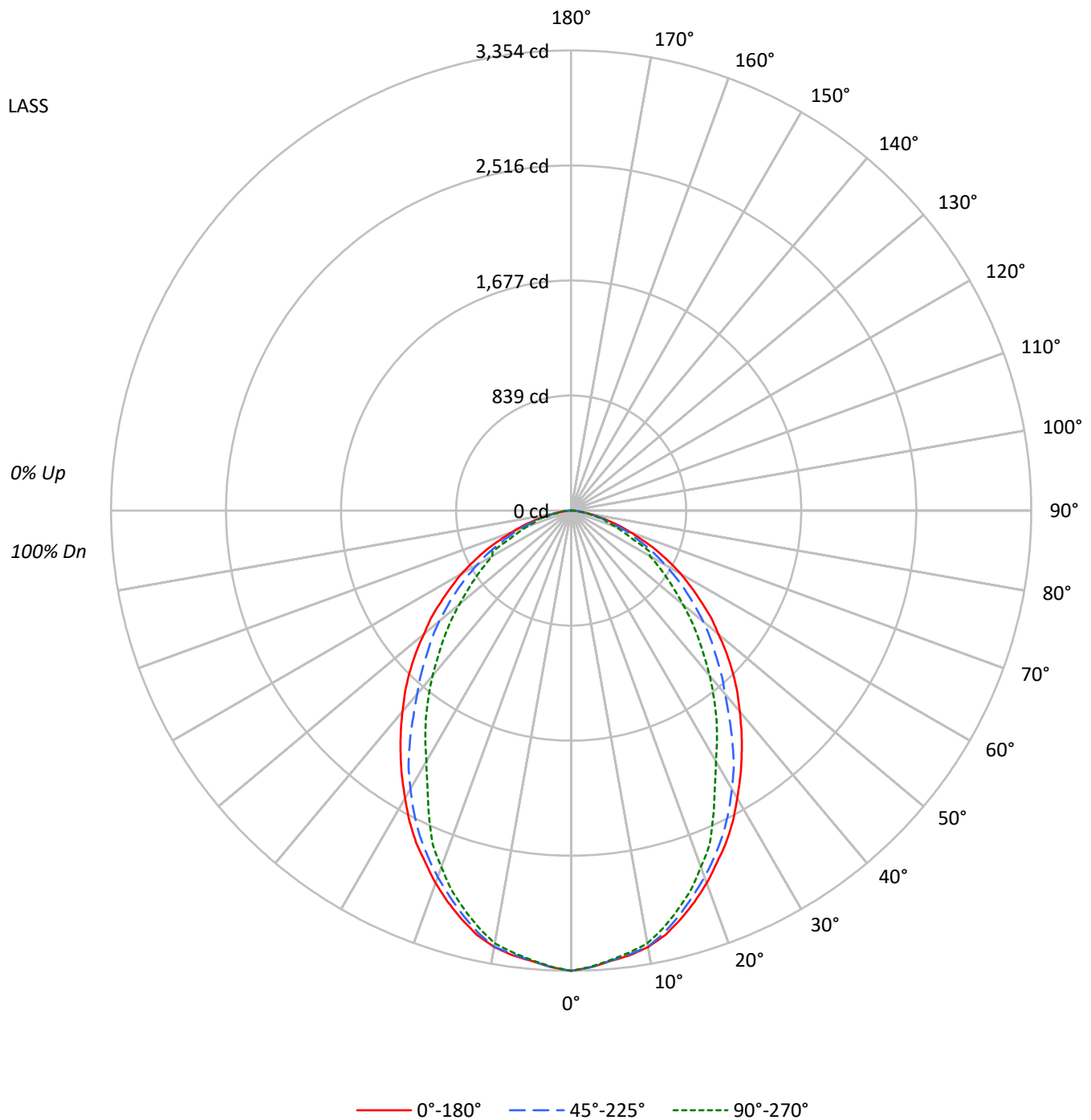
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9026	9026	9026
5°	8904	8893	8883
10°	8826	8816	8752
15°	8589	8502	8383
20°	8273	8140	7918
25°	7933	7760	7277
30°	7519	7278	6555
35°	7121	6726	6064
40°	6716	6130	5517
45°	6331	5667	4988
50°	5861	5260	4448
55°	5422	4767	3984
60°	4967	4258	3569
65°	4371	3729	3161
70°	3600	3264	2685
75°	2862	2499	2621
80°	1923	1802	1683
85°	1198	1436	1677

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6331 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.2	4.7
10°-20°	856.9	13.0
20°-30°	1186.3	18.0
30°-40°	1265.0	19.2
40°-50°	1154.0	17.5
50°-60°	904.1	13.7
60°-70°	589.3	8.9
70°-80°	261.1	4.0
80°-90°	56.1	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°	2355.5	35.8
0°-40°	3620.5	55.0
0°-60°	5678.6	86.2
0°-90°	6585.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6585.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3354	3354	3354	3354	3354	
5°	3296	3292	3292	3288	3288	313
15°	3083	3083	3052	3021	3009	867
25°	2672	2656	2614	2521	2451	1227
35°	2168	2152	2048	1892	1846	1355
45°	1664	1629	1489	1365	1311	1281
55°	1156	1121	1016	896	849	1036
65°	686	648	586	597	496	676
75°	275	256	240	229	252	295
85°	39	43	46	50	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3354.3	3354.3	3354.3	3354.3	3354.3
2.5°	3331.0	3331.0	3331.0	3327.2	3327.2
5°	3296.1	3292.3	3292.3	3288.4	3288.4
7.5°	3269.0	3265.1	3261.2	3257.4	3249.6
10°	3230.2	3230.2	3226.3	3207.0	3203.1
12.5°	3168.2	3164.3	3148.8	3121.6	3113.9
15°	3082.9	3082.9	3051.8	3020.8	3009.2
17.5°	2989.8	2985.9	2947.1	2916.1	2900.6
20°	2889.0	2881.2	2842.4	2792.0	2764.9
22.5°	2776.5	2776.5	2730.0	2664.1	2636.9
25°	2671.8	2656.3	2613.6	2520.6	2450.8
27.5°	2551.6	2528.3	2481.8	2350.0	2268.5
30°	2419.8	2408.1	2342.2	2171.6	2109.5
32.5°	2295.7	2276.3	2206.5	2028.1	1977.7
35°	2167.7	2152.2	2047.5	1892.4	1845.8
37.5°	2039.7	2020.3	1888.5	1764.4	1706.2
40°	1911.8	1888.5	1745.0	1632.6	1570.5
42.5°	1791.6	1760.5	1620.9	1500.7	1430.9
45°	1663.6	1628.7	1489.1	1365.0	1310.7
47.5°	1535.6	1504.6	1376.6	1248.7	1186.6
50°	1399.9	1372.7	1256.4	1128.4	1062.5
52.5°	1287.4	1244.8	1132.3	1004.4	950.1
55°	1155.6	1120.7	1016.0	895.8	849.2
57.5°	1035.4	1000.5	903.5	791.1	752.3
60°	922.9	872.5	791.1	694.1	663.1
62.5°	798.8	760.1	690.3	608.8	647.6
65°	686.4	647.6	585.6	597.2	496.4
67.5°	562.3	542.9	488.6	434.3	418.8
70°	457.6	434.3	414.9	356.8	341.2
72.5°	364.5	341.2	314.1	283.1	271.4
75°	275.3	255.9	240.4	228.8	252.1
77.5°	190.0	182.3	170.6	159.0	155.1
80°	124.1	120.2	116.3	112.5	108.6
82.5°	73.7	73.7	73.7	73.7	73.7
85°	38.8	42.7	46.5	50.4	54.3
87.5°	23.3	23.3	27.1	31.0	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)