

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: P561723

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561723
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-80-94-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 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: 6658.0 lumens
Efficiency: N/A
Efficacy: 100.0 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

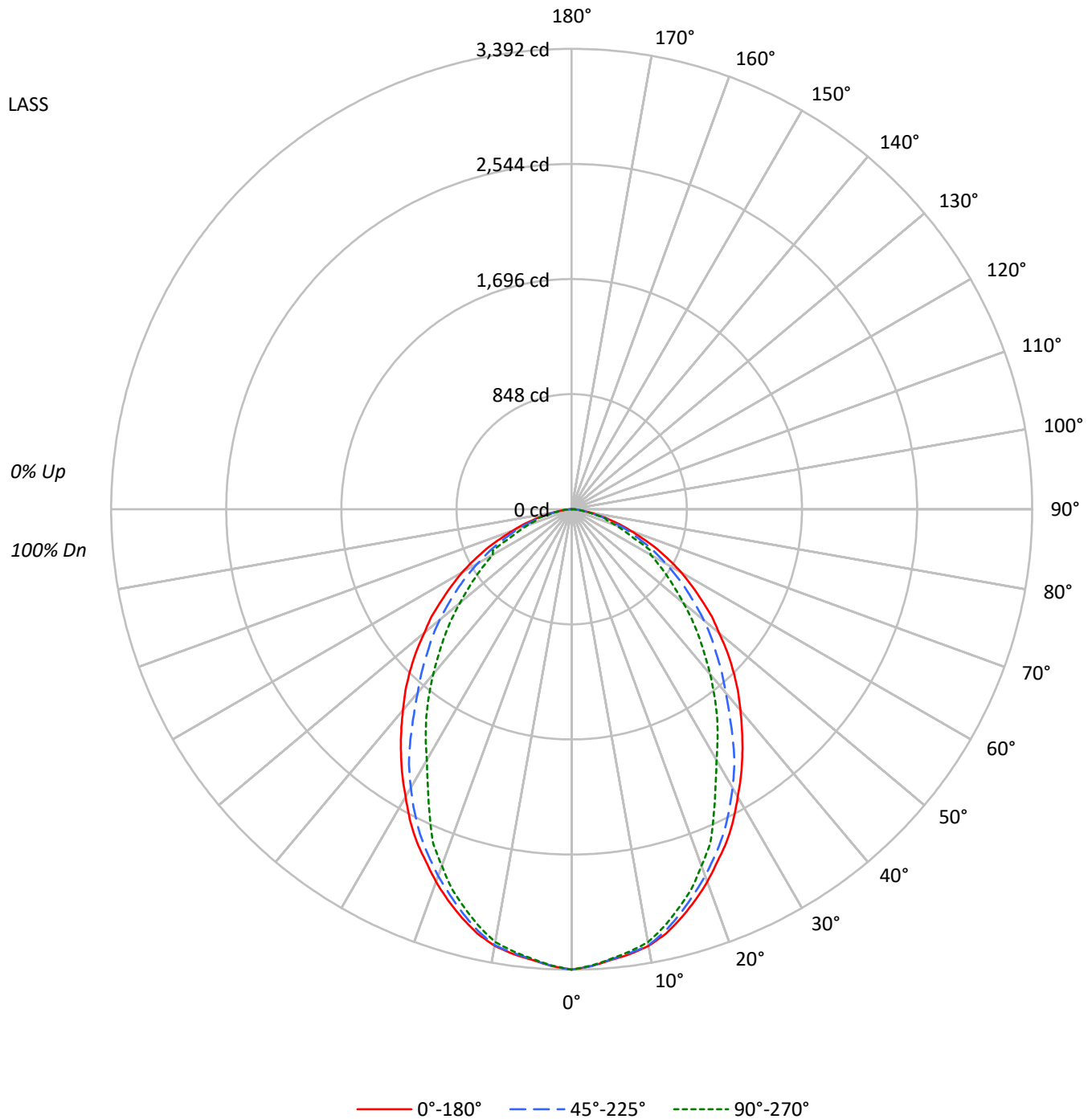
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9126	9126	9126
5°	9002	8992	8981
10°	8924	8914	8849
15°	8684	8596	8476
20°	8365	8230	8005
25°	8021	7846	7357
30°	7602	7359	6628
35°	7200	6801	6131
40°	6790	6198	5578
45°	6401	5730	5043
50°	5925	5318	4497
55°	5482	4820	4029
60°	5022	4304	3609
65°	4419	3769	3196
70°	3640	3301	2714
75°	2895	2528	2650
80°	1945	1822	1702
85°	1210	1451	1695

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6401 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.7	4.7
10°-20°	866.4	13.0
20°-30°	1199.5	18.0
30°-40°	1279.0	19.2
40°-50°	1166.8	17.5
50°-60°	914.1	13.7
60°-70°	595.8	8.9
70°-80°	264.0	4.0
80°-90°	56.7	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°	2381.6	35.8
0°-40°	3660.6	55.0
0°-60°	5741.6	86.2
0°-90°	6658.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6658.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3392	3392	3392	3392	3392	
5°	3333	3329	3329	3325	3325	316
15°	3117	3117	3086	3054	3042	876
25°	2701	2686	2643	2548	2478	1240
35°	2192	2176	2070	1913	1866	1370
45°	1682	1647	1506	1380	1325	1296
55°	1168	1133	1027	906	859	1048
65°	694	655	592	604	502	684
75°	278	259	243	231	255	298
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3391.5	3391.5	3391.5	3391.5	3391.5
2.5°	3368.0	3368.0	3368.0	3364.1	3364.1
5°	3332.7	3328.8	3328.8	3324.8	3324.8
7.5°	3305.2	3301.3	3297.4	3293.5	3285.6
10°	3266.0	3266.0	3262.1	3242.5	3238.6
12.5°	3203.3	3199.4	3183.7	3156.2	3148.4
15°	3117.0	3117.0	3085.7	3054.3	3042.5
17.5°	3022.9	3019.0	2979.8	2948.4	2932.8
20°	2921.0	2913.2	2873.9	2823.0	2795.5
22.5°	2807.3	2807.3	2760.2	2693.6	2666.1
25°	2701.4	2685.8	2642.6	2548.5	2477.9
27.5°	2579.9	2556.4	2509.3	2376.0	2293.7
30°	2446.6	2434.8	2368.2	2195.7	2132.9
32.5°	2321.1	2301.5	2230.9	2050.6	1999.6
35°	2191.7	2176.0	2070.2	1913.4	1866.3
37.5°	2062.3	2042.7	1909.4	1784.0	1725.2
40°	1933.0	1909.4	1764.4	1650.7	1587.9
42.5°	1811.4	1780.0	1638.9	1517.4	1446.8
45°	1682.0	1646.7	1505.6	1380.1	1325.2
47.5°	1552.6	1521.3	1391.9	1262.5	1199.8
50°	1415.4	1388.0	1270.3	1141.0	1074.3
52.5°	1301.7	1258.6	1144.9	1015.5	960.6
55°	1168.4	1133.1	1027.3	905.7	858.7
57.5°	1046.9	1011.6	913.5	799.8	760.6
60°	933.2	882.2	799.8	701.8	670.5
62.5°	807.7	768.5	697.9	615.6	654.8
65°	694.0	654.8	592.0	603.8	501.9
67.5°	568.5	548.9	494.0	439.1	423.4
70°	462.7	439.1	419.5	360.7	345.0
72.5°	368.6	345.0	317.6	286.2	274.5
75°	278.4	258.8	243.1	231.3	254.9
77.5°	192.1	184.3	172.5	160.8	156.8
80°	125.5	121.5	117.6	113.7	109.8
82.5°	74.5	74.5	74.5	74.5	74.5
85°	39.2	43.1	47.0	51.0	54.9
87.5°	23.5	23.5	27.4	31.4	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)