

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: P561787

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561787
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6725.0 lumens
Efficiency: N/A
Efficacy: 101.0 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

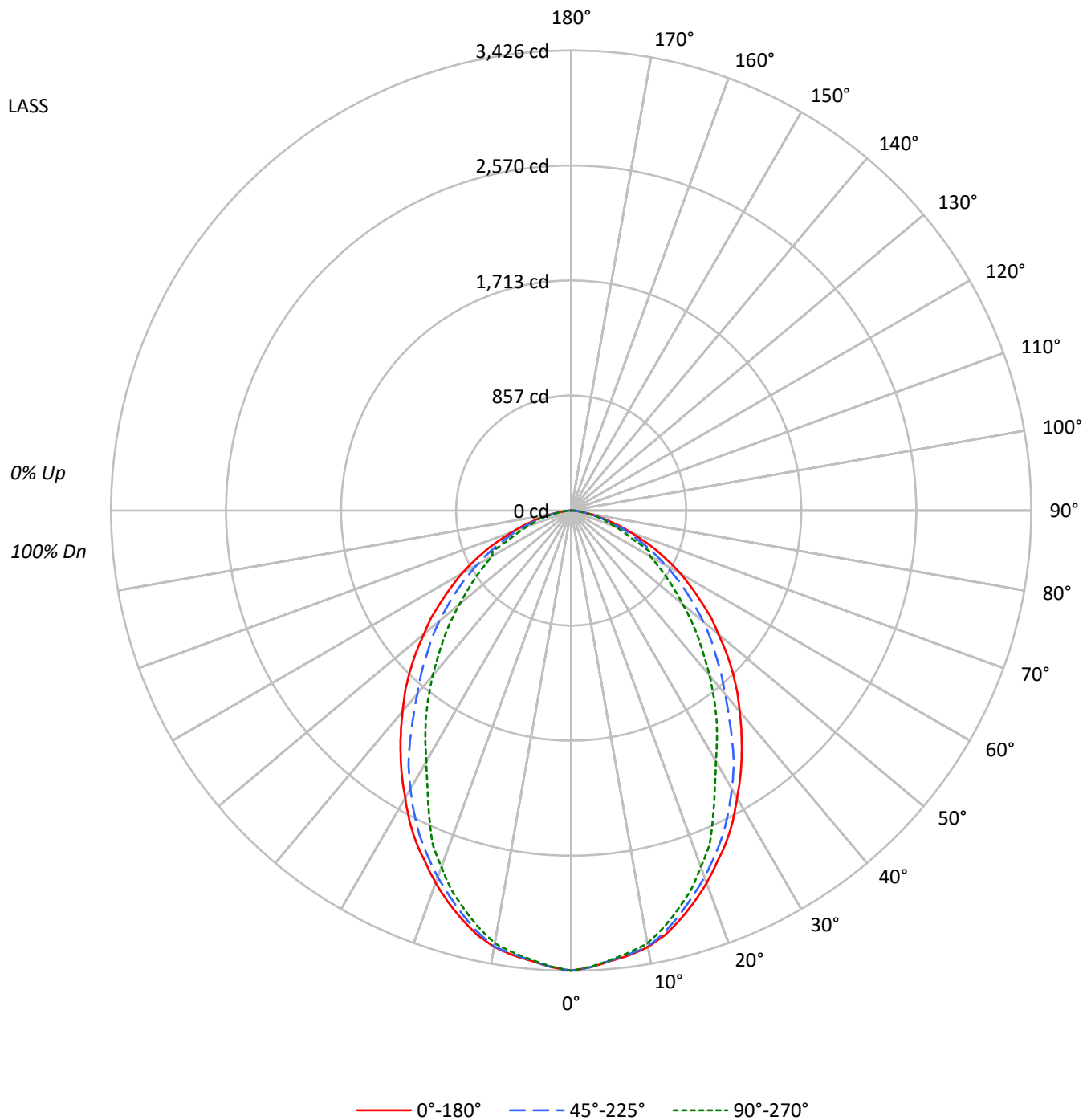
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9218	9218	9218
5°	9093	9082	9072
10°	9014	9003	8939
15°	8771	8683	8562
20°	8449	8313	8086
25°	8102	7925	7432
30°	7679	7433	6694
35°	7273	6869	6193
40°	6858	6260	5634
45°	6466	5787	5094
50°	5985	5372	4543
55°	5537	4868	4069
60°	5072	4348	3645
65°	4464	3808	3228
70°	3677	3334	2742
75°	2924	2552	2676
80°	1963	1841	1719
85°	1223	1467	1711

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6466 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.9	4.7
10°-20°	875.1	13.0
20°-30°	1211.6	18.0
30°-40°	1291.9	19.2
40°-50°	1178.6	17.5
50°-60°	923.3	13.7
60°-70°	601.8	8.9
70°-80°	266.6	4.0
80°-90°	57.2	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°	2405.6	35.8
0°-40°	3697.5	55.0
0°-60°	5799.4	86.2
0°-90°	6725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3426	3426	3426	3426	3426	
5°	3366	3362	3362	3358	3358	320
15°	3148	3148	3117	3085	3073	885
25°	2729	2713	2669	2574	2503	1253
35°	2214	2198	2091	1933	1885	1384
45°	1699	1663	1521	1394	1339	1309
55°	1180	1144	1038	915	867	1059
65°	701	661	598	610	507	691
75°	281	261	246	234	257	301
85°	40	44	48	52	55	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3425.6	3425.6	3425.6	3425.6	3425.6
2.5°	3401.9	3401.9	3401.9	3397.9	3397.9
5°	3366.2	3362.3	3362.3	3358.3	3358.3
7.5°	3338.5	3334.5	3330.6	3326.6	3318.7
10°	3298.9	3298.9	3294.9	3275.1	3271.2
12.5°	3235.5	3231.6	3215.7	3188.0	3180.1
15°	3148.4	3148.4	3116.7	3085.0	3073.2
17.5°	3053.4	3049.4	3009.8	2978.1	2962.3
20°	2950.4	2942.5	2902.9	2851.4	2823.7
22.5°	2835.5	2835.5	2788.0	2720.7	2693.0
25°	2728.6	2712.8	2669.2	2574.2	2502.9
27.5°	2605.9	2582.1	2534.6	2399.9	2316.8
30°	2471.2	2459.3	2392.0	2217.7	2154.4
32.5°	2344.5	2324.7	2253.4	2071.2	2019.7
35°	2213.8	2197.9	2091.0	1932.6	1885.1
37.5°	2083.1	2063.3	1928.6	1801.9	1742.5
40°	1952.4	1928.6	1782.1	1667.3	1603.9
42.5°	1829.6	1798.0	1655.4	1532.6	1461.3
45°	1699.0	1663.3	1520.7	1394.0	1338.6
47.5°	1568.3	1536.6	1405.9	1275.2	1211.8
50°	1429.7	1401.9	1283.1	1152.4	1085.1
52.5°	1314.8	1271.2	1156.4	1025.7	970.3
55°	1180.2	1144.5	1037.6	914.8	867.3
57.5°	1057.4	1021.7	922.7	807.9	768.3
60°	942.5	891.1	807.9	708.9	677.2
62.5°	815.8	776.2	704.9	621.8	661.4
65°	701.0	661.4	598.0	609.9	506.9
67.5°	574.2	554.4	499.0	443.5	427.7
70°	467.3	443.5	423.7	364.3	348.5
72.5°	372.3	348.5	320.8	289.1	277.2
75°	281.2	261.4	245.5	233.7	257.4
77.5°	194.1	186.1	174.3	162.4	158.4
80°	126.7	122.8	118.8	114.8	110.9
82.5°	75.2	75.2	75.2	75.2	75.2
85°	39.6	43.6	47.5	51.5	55.4
87.5°	23.8	23.8	27.7	31.7	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)