

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: P561468

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561468
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-LD4-2HI-50-UNV-80-96-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

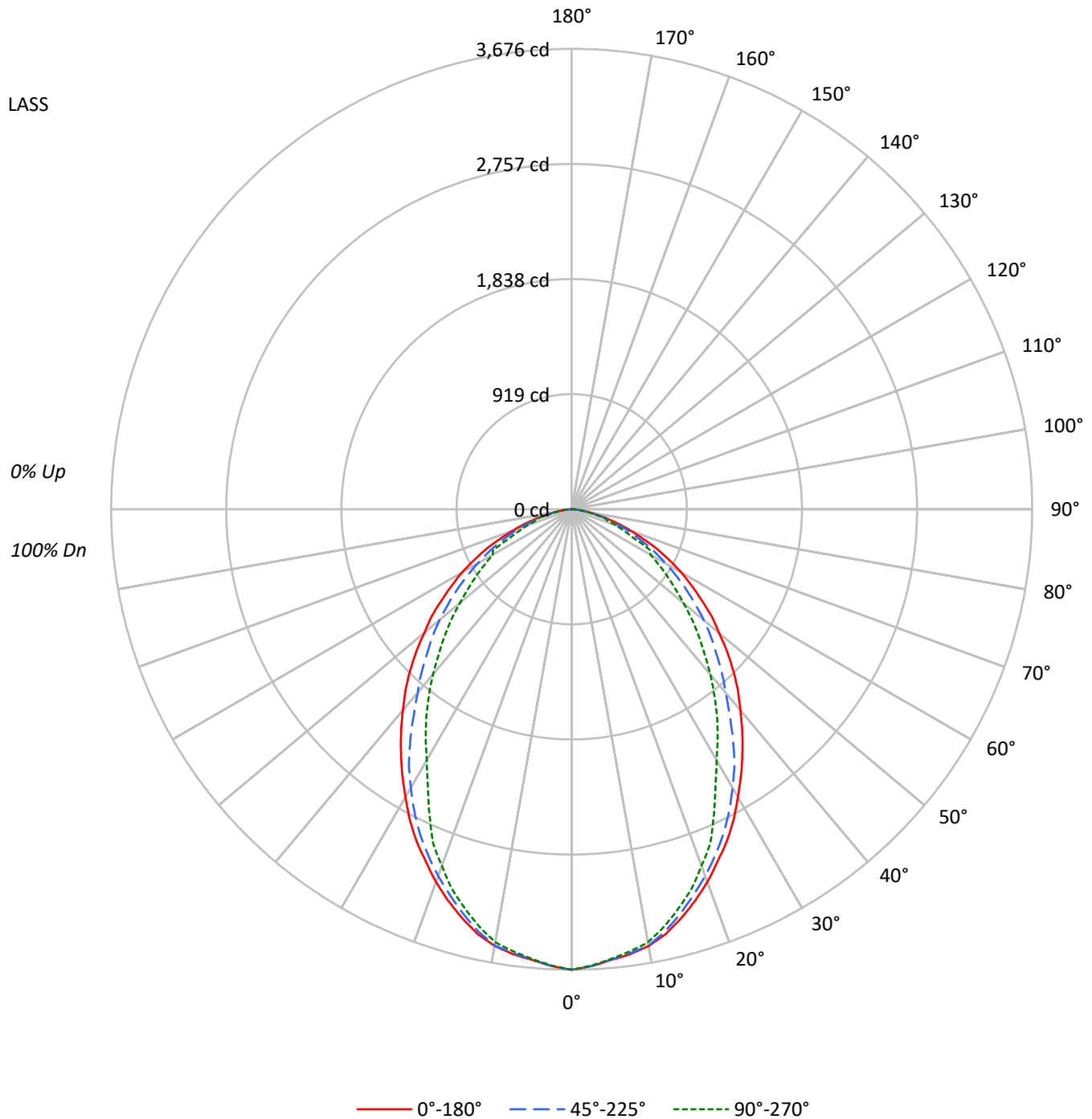
Lumens per Lamp: N/A
Luminaire Lumens: 7216.9 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	9893	9893	9893
5°	9758	9747	9735
10°	9674	9662	9592
15°	9413	9318	9188
20°	9067	8921	8678
25°	8694	8505	7975
30°	8240	7976	7184
35°	7804	7372	6646
40°	7360	6718	6046
45°	6938	6211	5467
50°	6423	5765	4875
55°	5942	5224	4366
60°	5444	4666	3911
65°	4790	4086	3464
70°	3946	3578	2943
75°	3137	2740	2872
80°	2108	1976	1844
85°	1312	1575	1837

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6938 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.2	4.7
10°-20°	939.2	13.0
20°-30°	1300.2	18.0
30°-40°	1386.4	19.2
40°-50°	1264.8	17.5
50°-60°	990.8	13.7
60°-70°	645.8	8.9
70°-80°	286.1	4.0
80°-90°	61.4	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°	2581.6	35.8
0°-40°	3968.0	55.0
0°-60°	6223.6	86.2
0°-90°	7216.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7216.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3676	3676	3676	3676	3676	
5°	3612	3608	3608	3604	3604	343
15°	3379	3379	3345	3311	3298	950
25°	2928	2911	2864	2762	2686	1344
35°	2376	2359	2244	2074	2023	1485
45°	1823	1785	1632	1496	1436	1404
55°	1266	1228	1114	982	931	1136
65°	752	710	642	654	544	741
75°	302	280	264	251	276	323
85°	42	47	51	55	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3676.2	3676.2	3676.2	3676.2	3676.2
2.5°	3650.7	3650.7	3650.7	3646.5	3646.5
5°	3612.5	3608.2	3608.2	3604.0	3604.0
7.5°	3582.7	3578.5	3574.2	3570.0	3561.5
10°	3540.2	3540.2	3536.0	3514.7	3510.5
12.5°	3472.2	3468.0	3451.0	3421.2	3412.7
15°	3378.7	3378.7	3344.7	3310.7	3298.0
17.5°	3276.7	3272.5	3230.0	3196.0	3179.0
20°	3166.2	3157.7	3115.2	3060.0	3030.2
22.5°	3043.0	3043.0	2992.0	2919.7	2890.0
25°	2928.2	2911.2	2864.5	2762.5	2686.0
27.5°	2796.5	2771.0	2720.0	2575.5	2486.2
30°	2652.0	2639.2	2567.0	2380.0	2312.0
32.5°	2516.0	2494.7	2418.2	2222.7	2167.5
35°	2375.7	2358.7	2244.0	2074.0	2023.0
37.5°	2235.5	2214.2	2069.7	1933.7	1870.0
40°	2095.2	2069.7	1912.5	1789.2	1721.2
42.5°	1963.5	1929.5	1776.5	1644.7	1568.2
45°	1823.2	1785.0	1632.0	1496.0	1436.5
47.5°	1683.0	1649.0	1508.7	1368.5	1300.5
50°	1534.2	1504.5	1377.0	1236.7	1164.5
52.5°	1411.0	1364.2	1241.0	1100.7	1041.2
55°	1266.5	1228.2	1113.5	981.7	930.7
57.5°	1134.7	1096.5	990.2	867.0	824.5
60°	1011.5	956.2	867.0	760.7	726.7
62.5°	875.5	833.0	756.5	667.2	709.7
65°	752.2	709.7	641.7	654.5	544.0
67.5°	616.2	595.0	535.5	476.0	459.0
70°	501.5	476.0	454.7	391.0	374.0
72.5°	399.5	374.0	344.2	310.2	297.5
75°	301.7	280.5	263.5	250.7	276.2
77.5°	208.2	199.7	187.0	174.2	170.0
80°	136.0	131.7	127.5	123.2	119.0
82.5°	80.7	80.7	80.7	80.7	80.7
85°	42.5	46.7	51.0	55.2	59.5
87.5°	25.5	25.5	29.7	34.0	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)