

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: P563900

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563900
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-LD4-4LO-40-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9805.0 lumens
Efficiency: N/A
Efficacy: 104.8 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

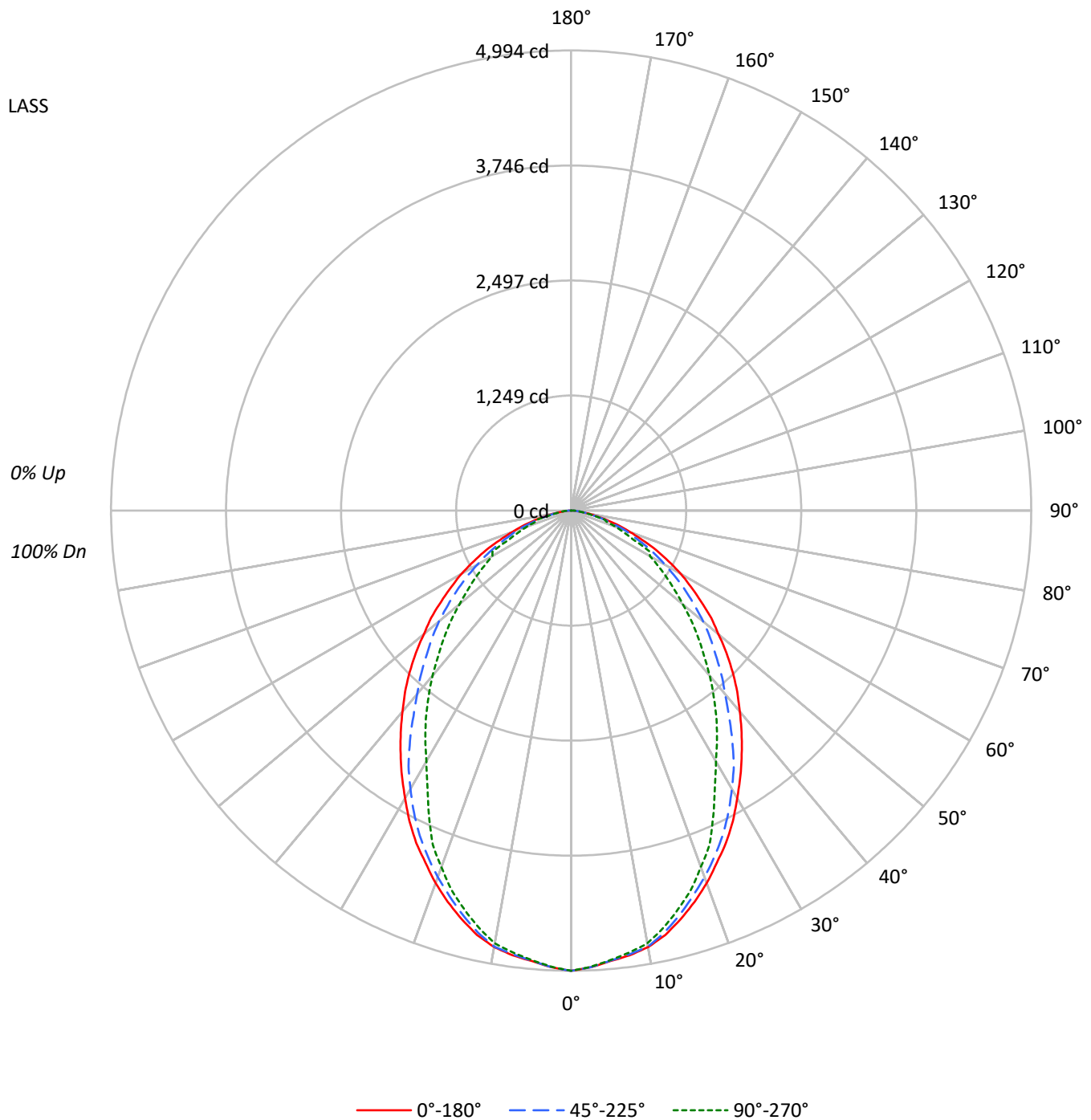
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6720	6720	6720
5°	6629	6621	6613
10°	6571	6563	6516
15°	6394	6330	6241
20°	6159	6060	5895
25°	5906	5778	5418
30°	5598	5418	4880
35°	5302	5008	4514
40°	5000	4564	4107
45°	4713	4219	3714
50°	4363	3916	3312
55°	4036	3549	2966
60°	3698	3170	2657
65°	3254	2776	2353
70°	2680	2430	1999
75°	2131	1861	1951
80°	1432	1342	1253
85°	891	1070	1247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4713 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	464.9	4.7
10°-20°	1275.9	13.0
20°-30°	1766.5	18.0
30°-40°	1883.6	19.2
40°-50°	1718.4	17.5
50°-60°	1346.2	13.7
60°-70°	877.4	8.9
70°-80°	388.7	4.0
80°-90°	83.5	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°	3507.3	35.8
0°-40°	5390.9	55.0
0°-60°	8455.5	86.2
0°-90°	9805.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9805.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4994	4994	4994	4994	4994	
5°	4908	4902	4902	4896	4896	466
15°	4590	4590	4544	4498	4481	1290
25°	3978	3955	3892	3753	3649	1826
35°	3228	3205	3049	2818	2748	2018
45°	2477	2425	2217	2032	1952	1908
55°	1721	1669	1513	1334	1264	1543
65°	1022	964	872	889	739	1007
75°	410	381	358	341	375	439
85°	58	64	69	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4994.5	4994.5	4994.5	4994.5	4994.5
2.5°	4959.9	4959.9	4959.9	4954.1	4954.1
5°	4907.9	4902.2	4902.2	4896.4	4896.4
7.5°	4867.5	4861.7	4856.0	4850.2	4838.6
10°	4809.8	4809.8	4804.0	4775.1	4769.3
12.5°	4717.4	4711.6	4688.5	4648.1	4636.5
15°	4590.4	4590.4	4544.2	4498.0	4480.6
17.5°	4451.8	4446.0	4388.3	4342.1	4319.0
20°	4301.7	4290.1	4232.4	4157.3	4116.9
22.5°	4134.2	4134.2	4064.9	3966.8	3926.3
25°	3978.3	3955.2	3891.7	3753.1	3649.2
27.5°	3799.3	3764.7	3695.4	3499.1	3377.8
30°	3603.0	3585.7	3487.5	3233.5	3141.1
32.5°	3418.2	3389.4	3285.4	3019.8	2944.8
35°	3227.7	3204.6	3048.7	2817.7	2748.4
37.5°	3037.1	3008.3	2812.0	2627.2	2540.6
40°	2846.6	2812.0	2598.3	2430.9	2338.5
42.5°	2667.6	2621.4	2413.5	2234.5	2130.6
45°	2477.1	2425.1	2217.2	2032.5	1951.6
47.5°	2286.5	2240.3	2049.8	1859.2	1766.9
50°	2084.4	2044.0	1870.8	1680.2	1582.1
52.5°	1917.0	1853.5	1686.0	1495.5	1414.6
55°	1720.7	1668.7	1512.8	1333.8	1264.5
57.5°	1541.7	1489.7	1345.3	1177.9	1120.2
60°	1374.2	1299.2	1177.9	1033.6	987.4
62.5°	1189.5	1131.7	1027.8	906.5	964.3
65°	1022.0	964.3	871.9	889.2	739.1
67.5°	837.2	808.4	727.5	646.7	623.6
70°	681.3	646.7	617.8	531.2	508.1
72.5°	542.8	508.1	467.7	421.5	404.2
75°	410.0	381.1	358.0	340.7	375.3
77.5°	282.9	271.4	254.1	236.7	231.0
80°	184.8	179.0	173.2	167.4	161.7
82.5°	109.7	109.7	109.7	109.7	109.7
85°	57.7	63.5	69.3	75.1	80.8
87.5°	34.6	34.6	40.4	46.2	52.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)