

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: P562045

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562045
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-LD4-1HI-40-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 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: 4792.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

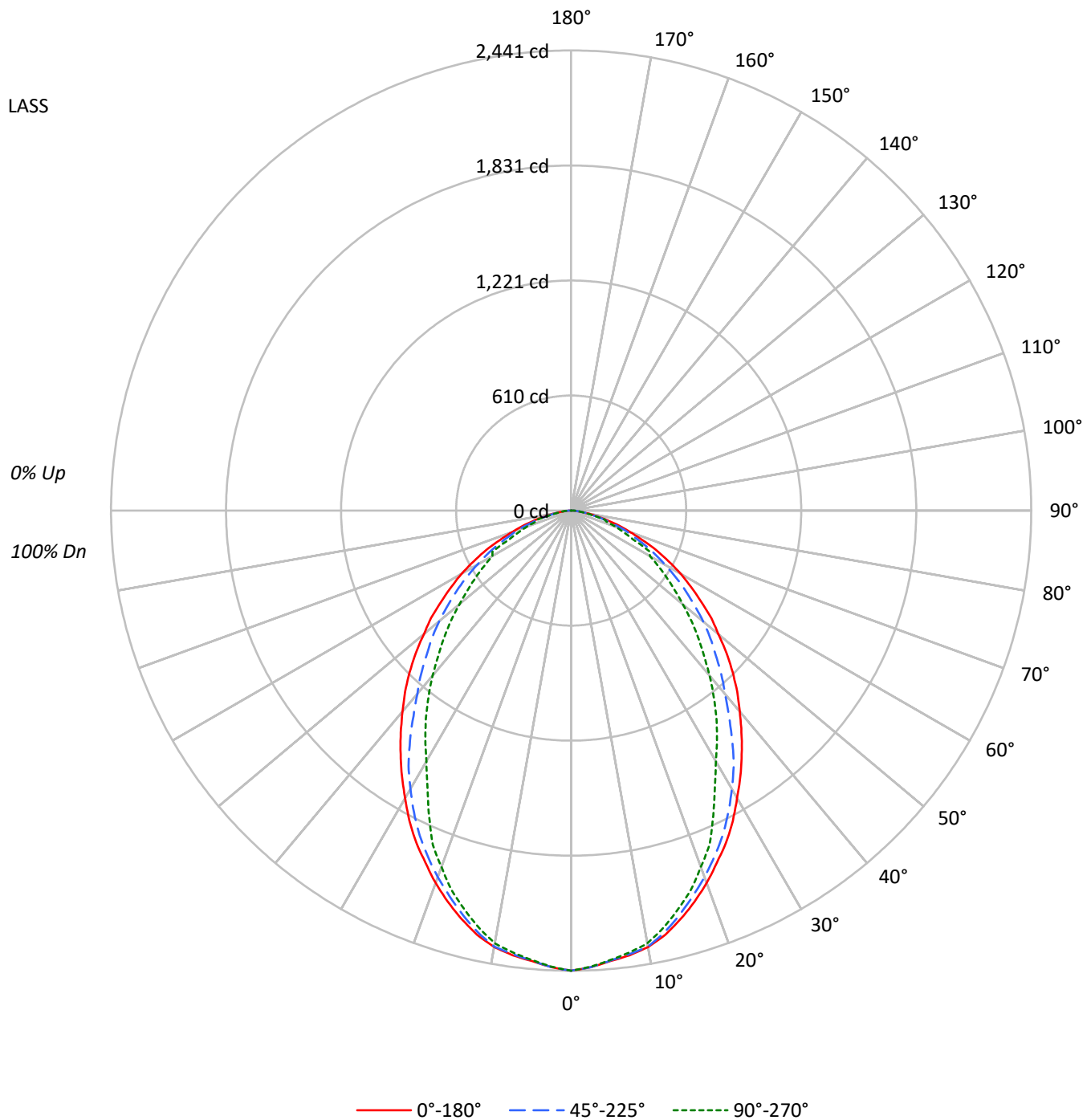
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3284	3284	3284
5°	3240	3236	3232
10°	3212	3208	3185
15°	3125	3094	3050
20°	3010	2962	2881
25°	2886	2824	2648
30°	2736	2648	2385
35°	2591	2447	2206
40°	2444	2230	2007
45°	2304	2062	1815
50°	2132	1914	1618
55°	1973	1734	1450
60°	1807	1549	1299
65°	1590	1357	1150
70°	1310	1188	977
75°	1042	910	953
80°	700	656	612
85°	435	523	610

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2304 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.2	4.7
10°-20°	623.6	13.0
20°-30°	863.3	18.0
30°-40°	920.6	19.2
40°-50°	839.8	17.5
50°-60°	657.9	13.7
60°-70°	428.8	8.9
70°-80°	190.0	4.0
80°-90°	40.8	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°	1714.1	35.8
0°-40°	2634.7	55.0
0°-60°	4132.4	86.2
0°-90°	4792.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4792.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2441	2441	2441	2441	2441	
5°	2399	2396	2396	2393	2393	228
15°	2243	2243	2221	2198	2190	631
25°	1944	1933	1902	1834	1784	893
35°	1578	1566	1490	1377	1343	986
45°	1211	1185	1084	993	954	933
55°	841	816	739	652	618	754
65°	500	471	426	435	361	492
75°	200	186	175	166	183	215
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2441.0	2441.0	2441.0	2441.0	2441.0
2.5°	2424.0	2424.0	2424.0	2421.2	2421.2
5°	2398.7	2395.8	2395.8	2393.0	2393.0
7.5°	2378.9	2376.1	2373.3	2370.4	2364.8
10°	2350.7	2350.7	2347.9	2333.7	2330.9
12.5°	2305.5	2302.7	2291.4	2271.7	2266.0
15°	2243.4	2243.4	2220.9	2198.3	2189.8
17.5°	2175.7	2172.9	2144.7	2122.1	2110.8
20°	2102.3	2096.7	2068.5	2031.8	2012.0
22.5°	2020.5	2020.5	1986.6	1938.7	1918.9
25°	1944.3	1933.0	1902.0	1834.3	1783.5
27.5°	1856.8	1839.9	1806.0	1710.1	1650.8
30°	1760.9	1752.4	1704.5	1580.3	1535.1
32.5°	1670.6	1656.5	1605.7	1475.9	1439.2
35°	1577.5	1566.2	1490.0	1377.1	1343.2
37.5°	1484.3	1470.2	1374.3	1284.0	1241.7
40°	1391.2	1374.3	1269.9	1188.0	1142.9
42.5°	1303.7	1281.2	1179.6	1092.1	1041.3
45°	1210.6	1185.2	1083.6	993.3	953.8
47.5°	1117.5	1094.9	1001.8	908.7	863.5
50°	1018.7	999.0	914.3	821.2	773.2
52.5°	936.9	905.8	824.0	730.9	691.4
55°	840.9	815.5	739.3	651.9	618.0
57.5°	753.5	728.1	657.5	575.7	547.5
60°	671.6	634.9	575.7	505.1	482.6
62.5°	581.3	553.1	502.3	443.0	471.3
65°	499.5	471.3	426.1	434.6	361.2
67.5°	409.2	395.1	355.6	316.1	304.8
70°	333.0	316.1	301.9	259.6	248.3
72.5°	265.3	248.3	228.6	206.0	197.5
75°	200.4	186.2	175.0	166.5	183.4
77.5°	138.3	132.6	124.2	115.7	112.9
80°	90.3	87.5	84.7	81.8	79.0
82.5°	53.6	53.6	53.6	53.6	53.6
85°	28.2	31.0	33.9	36.7	39.5
87.5°	16.9	16.9	19.8	22.6	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)