

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: P589884

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-40-UNV-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 2310.0 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

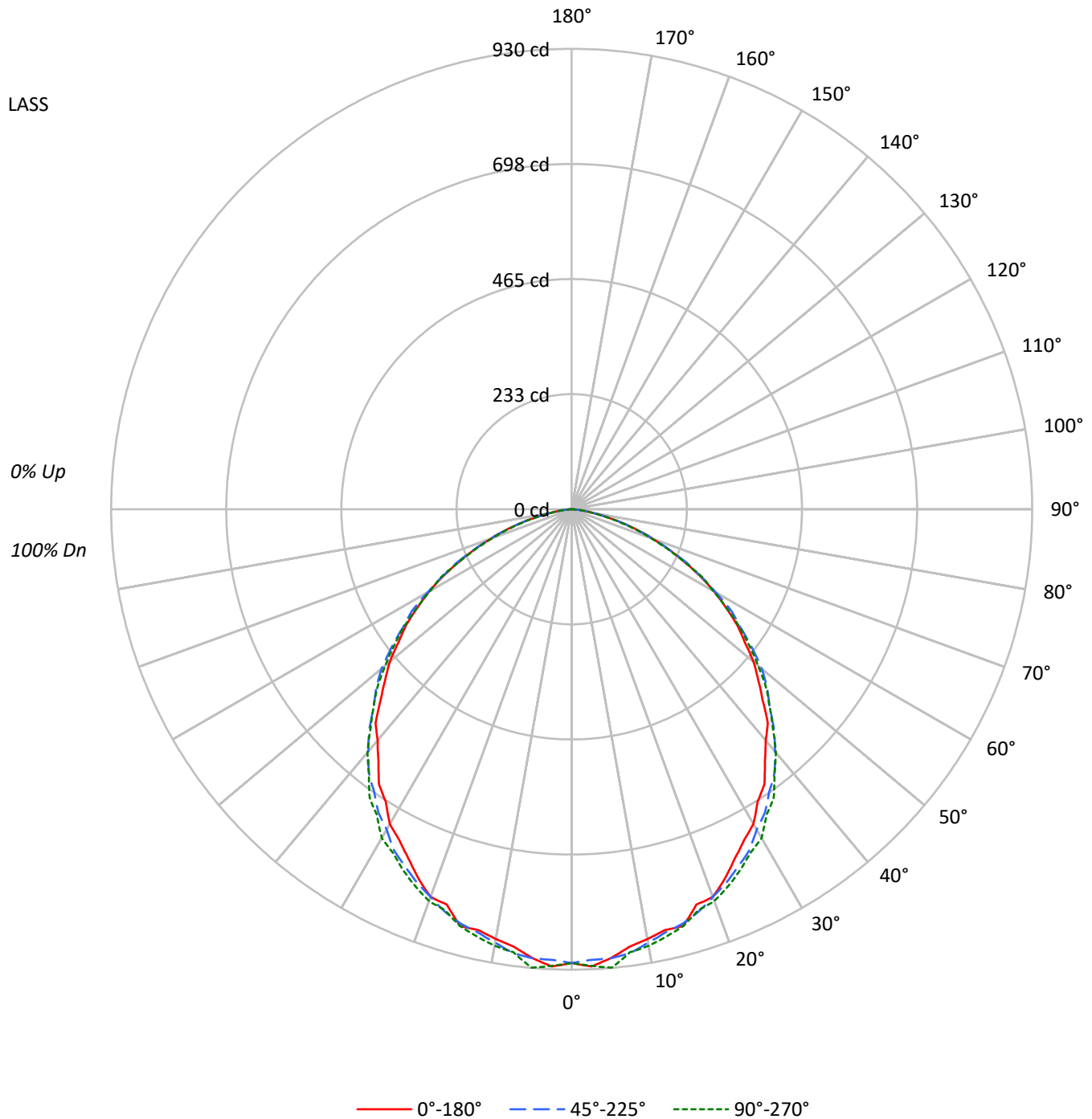
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2466	2466	2466
5°	2458	2459	2511
10°	2408	2429	2447
15°	2427	2414	2428
20°	2387	2387	2412
25°	2313	2364	2390
30°	2281	2321	2383
35°	2228	2286	2337
40°	2141	2244	2254
45°	2076	2150	2153
50°	2008	2099	2058
55°	1913	1950	1937
60°	1789	1807	1774
65°	1595	1636	1584
70°	1369	1374	1335
75°	1084	1081	1040
80°	727	707	679
85°	395	392	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2205 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	3.7
10°-20°	244.3	10.6
20°-30°	366.1	15.8
30°-40°	433.9	18.8
40°-50°	434.7	18.8
50°-60°	369.0	16.0
60°-70°	248.8	10.8
70°-80°	109.3	4.7
80°-90°	17.8	0.8
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°	696.6	30.2
0°-40°	1130.5	48.9
0°-60°	1934.2	83.7
0°-90°	2310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	910	908	910	908	930	86
15°	871	861	867	871	872	243
25°	779	783	796	806	805	360
35°	678	680	696	712	712	421
45°	546	556	565	580	566	422
55°	408	405	416	413	413	363
65°	250	247	257	247	249	249
75°	104	102	104	97	100	112
85°	13	12	13	12	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	916.5	916.5	916.5	916.5	916.5
2.5°	924.5	917.5	911.0	918.6	923.2
5°	910.0	907.9	910.4	907.7	929.6
7.5°	891.3	899.5	904.2	901.3	902.6
10°	881.4	878.6	889.1	896.4	895.4
12.5°	870.8	875.0	875.6	883.5	884.2
15°	871.3	861.3	866.6	871.1	871.5
17.5°	837.5	848.4	852.1	862.3	849.6
20°	833.4	825.4	833.4	843.9	842.2
22.5°	807.9	799.0	816.1	825.4	824.8
25°	779.0	783.3	796.1	806.5	804.8
27.5°	753.7	758.7	776.9	791.2	782.0
30°	734.2	731.7	747.1	759.9	767.0
32.5°	699.3	708.3	726.3	738.9	732.2
35°	678.1	680.1	695.8	711.9	711.5
37.5°	641.1	650.4	672.5	677.0	672.9
40°	609.5	618.8	638.8	643.7	641.6
42.5°	586.1	587.8	605.0	610.5	601.6
45°	545.6	555.7	565.0	579.5	565.8
47.5°	511.0	515.7	535.6	539.5	532.3
50°	479.6	481.3	501.3	496.4	491.7
52.5°	440.2	447.2	458.5	457.5	451.9
55°	407.8	405.1	415.7	412.9	412.8
57.5°	368.9	373.6	382.4	377.9	370.6
60°	332.4	332.5	335.7	330.6	329.7
62.5°	291.8	293.2	294.0	287.7	297.9
65°	250.5	247.2	256.9	247.1	248.8
67.5°	212.5	214.2	213.3	207.1	209.5
70°	174.0	176.1	174.6	167.6	169.7
72.5°	138.7	136.1	137.7	129.0	133.0
75°	104.3	102.1	104.0	96.7	100.0
77.5°	71.0	72.7	71.5	67.6	69.8
80°	46.9	45.6	45.6	43.3	43.8
82.5°	27.3	26.0	25.7	25.0	26.0
85°	12.8	12.4	12.7	12.3	11.8
87.5°	4.6	4.7	4.7	4.5	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)