

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: P590075

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590075
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-LD4-1STD-40-UNV-80-96-EDD
Description: 2X2 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: 1953.0 lumens
Efficiency: N/A
Efficacy: 117.6 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

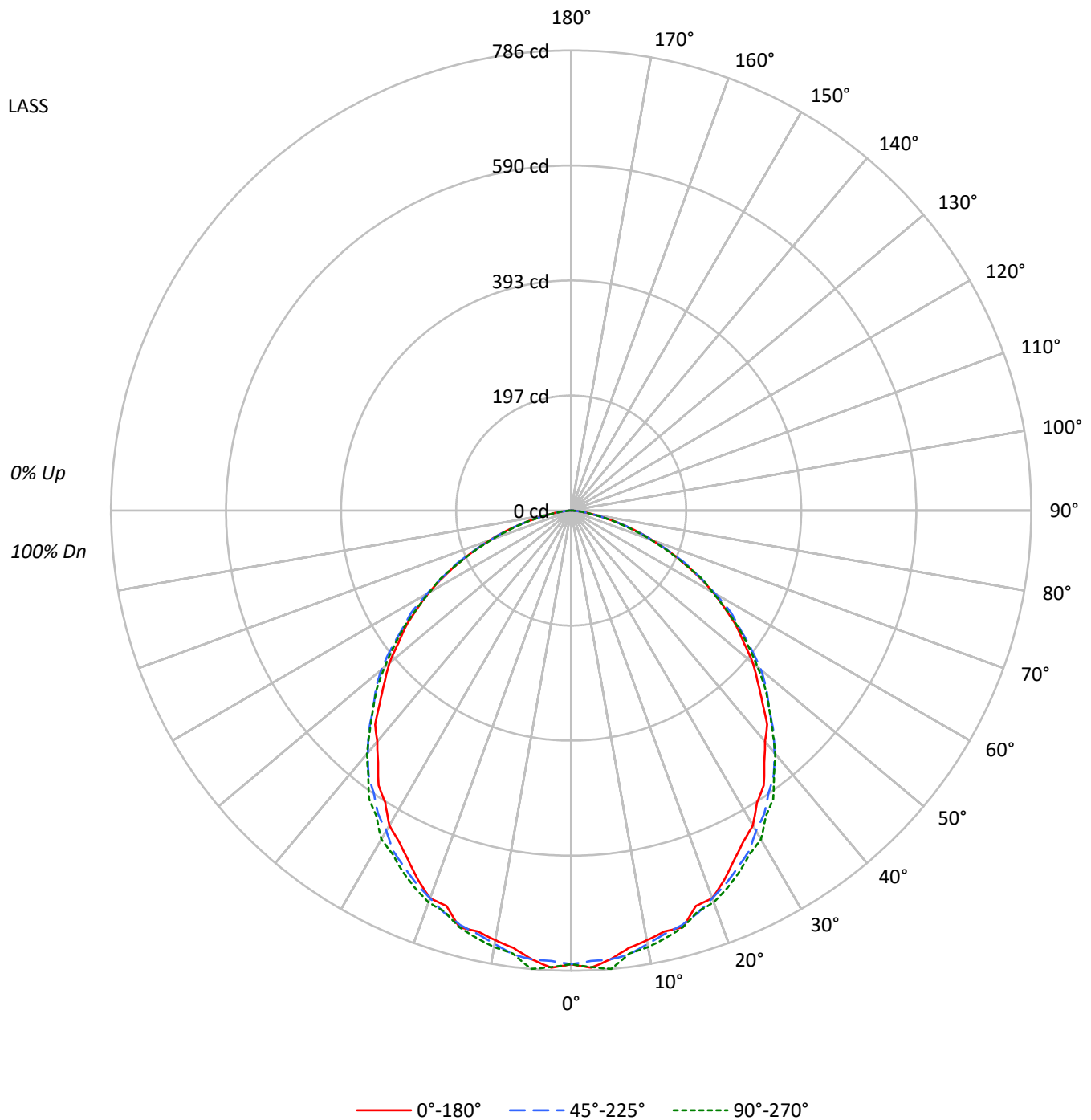
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2085	2085	2085
5°	2078	2079	2123
10°	2036	2054	2068
15°	2052	2041	2053
20°	2018	2018	2039
25°	1955	1998	2021
30°	1929	1963	2015
35°	1883	1933	1976
40°	1810	1897	1906
45°	1755	1818	1820
50°	1698	1774	1740
55°	1618	1649	1637
60°	1512	1527	1500
65°	1349	1383	1339
70°	1157	1161	1129
75°	916	914	879
80°	614	597	573
85°	333	330	309

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1865 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	3.7
10°-20°	206.6	10.6
20°-30°	309.5	15.8
30°-40°	366.8	18.8
40°-50°	367.5	18.8
50°-60°	312.0	16.0
60°-70°	210.3	10.8
70°-80°	92.4	4.7
80°-90°	15.0	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°	589.0	30.2
0°-40°	955.8	48.9
0°-60°	1635.3	83.7
0°-90°	1953.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1953.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	769	768	770	767	786	73
15°	737	728	733	736	737	205
25°	659	662	673	682	680	304
35°	573	575	588	602	602	356
45°	461	470	478	490	478	357
55°	345	342	352	349	349	307
65°	212	209	217	209	210	211
75°	88	86	88	82	84	94
85°	11	10	11	10	10	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	774.9	774.9	774.9	774.9	774.9
2.5°	781.6	775.7	770.2	776.6	780.5
5°	769.4	767.6	769.7	767.4	785.9
7.5°	753.6	760.5	764.5	762.0	763.1
10°	745.2	742.8	751.7	757.9	757.0
12.5°	736.2	739.8	740.3	747.0	747.6
15°	736.7	728.2	732.7	736.5	736.8
17.5°	708.1	717.3	720.4	729.1	718.3
20°	704.6	697.9	704.6	713.5	712.1
22.5°	683.1	675.5	690.0	697.9	697.4
25°	658.6	662.2	673.0	681.9	680.5
27.5°	637.2	641.4	656.8	668.9	661.1
30°	620.7	618.6	631.6	642.4	648.4
32.5°	591.2	598.8	614.0	624.7	619.0
35°	573.3	575.0	588.3	601.9	601.5
37.5°	542.0	549.9	568.6	572.4	568.9
40°	515.3	523.2	540.1	544.2	542.5
42.5°	495.6	497.0	511.5	516.2	508.7
45°	461.2	469.8	477.6	490.0	478.3
47.5°	432.0	436.0	452.8	456.1	450.0
50°	405.5	406.9	423.8	419.7	415.7
52.5°	372.2	378.1	387.6	386.8	382.1
55°	344.8	342.5	351.5	349.1	349.0
57.5°	311.9	315.9	323.3	319.5	313.4
60°	281.0	281.1	283.8	279.5	278.7
62.5°	246.7	247.9	248.5	243.2	251.8
65°	211.8	209.0	217.2	208.9	210.3
67.5°	179.7	181.1	180.3	175.1	177.1
70°	147.1	148.9	147.6	141.7	143.5
72.5°	117.3	115.1	116.5	109.1	112.5
75°	88.1	86.3	87.9	81.7	84.5
77.5°	60.0	61.4	60.4	57.1	59.0
80°	39.6	38.5	38.5	36.6	37.0
82.5°	23.1	22.0	21.7	21.1	22.0
85°	10.8	10.5	10.7	10.4	10.0
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)