

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: P559100

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559100
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-12-1-LD4-2HI-40-UNV-80-96-EDD-90
Description: 1X1 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

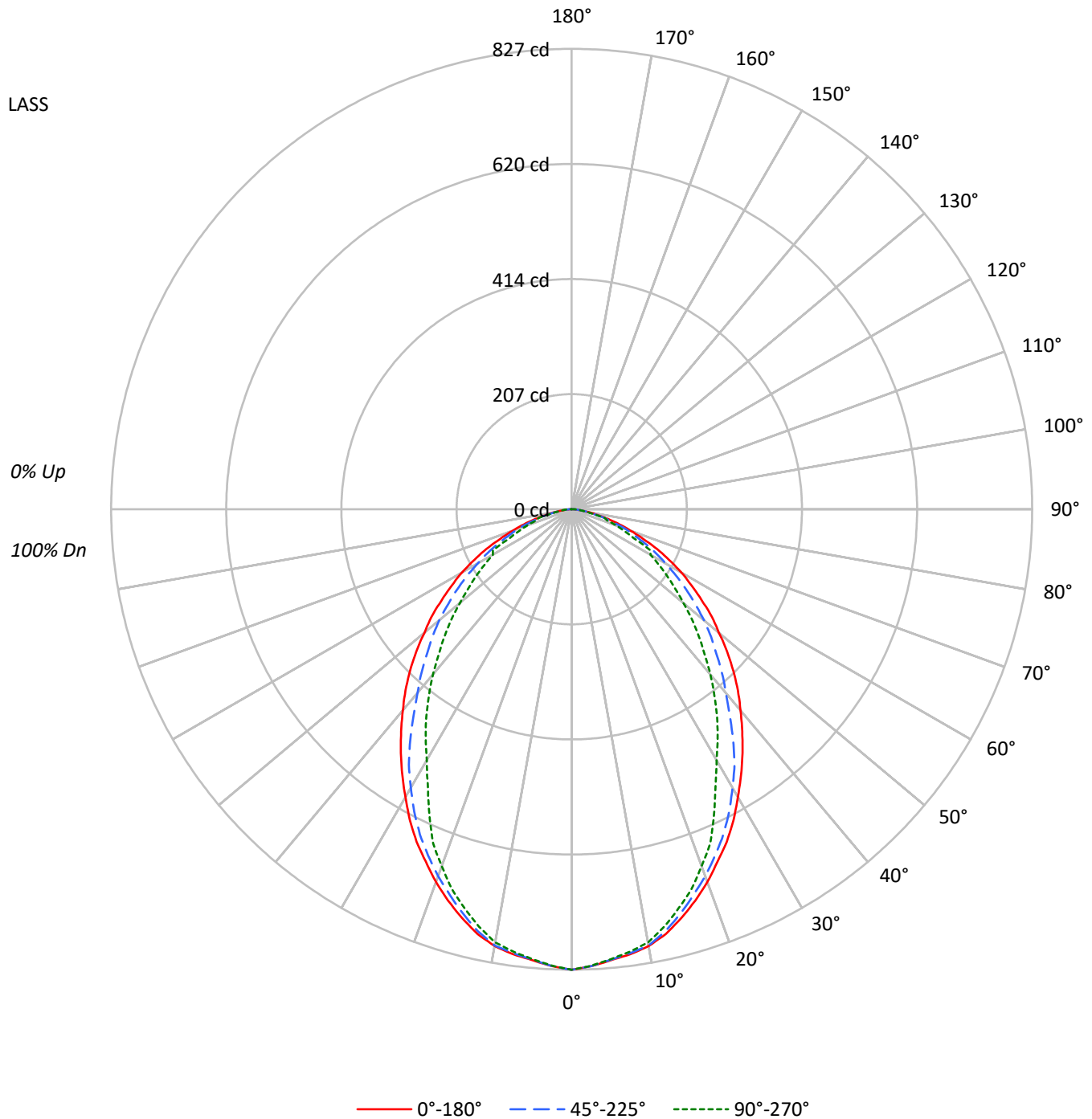
Lumens per Lamp: N/A
Luminaire Lumens: 1624.0 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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	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°	8904	8904	8904
5°	8783	8773	8763
10°	8707	8697	8634
15°	8472	8387	8270
20°	8161	8030	7811
25°	7826	7656	7178
30°	7418	7179	6467
35°	7025	6636	5981
40°	6625	6048	5442
45°	6246	5590	4920
50°	5781	5189	4387
55°	5348	4703	3930
60°	4900	4200	3520
65°	4312	3678	3117
70°	3550	3220	2650
75°	2824	2466	2587
80°	1897	1779	1661
85°	1186	1420	1655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6246 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.0	4.7
10°-20°	211.3	13.0
20°-30°	292.6	18.0
30°-40°	312.0	19.2
40°-50°	284.6	17.5
50°-60°	223.0	13.7
60°-70°	145.3	8.9
70°-80°	64.4	4.0
80°-90°	13.8	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°	580.9	35.8
0°-40°	892.9	55.0
0°-60°	1400.5	86.2
0°-90°	1624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1624.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	813	812	812	811	811	77
15°	760	760	753	745	742	214
25°	659	655	645	622	604	303
35°	535	531	505	467	455	334
45°	410	402	367	337	323	316
55°	285	276	251	221	209	256
65°	169	160	144	147	122	167
75°	68	63	59	56	62	73
85°	10	10	12	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	827.2	827.2	827.2	827.2	827.2
2.5°	821.5	821.5	821.5	820.5	820.5
5°	812.9	811.9	811.9	811.0	811.0
7.5°	806.2	805.2	804.3	803.3	801.4
10°	796.6	796.6	795.7	790.9	789.9
12.5°	781.3	780.4	776.6	769.9	768.0
15°	760.3	760.3	752.6	745.0	742.1
17.5°	737.3	736.4	726.8	719.2	715.4
20°	712.5	710.6	701.0	688.6	681.9
22.5°	684.7	684.7	673.3	657.0	650.3
25°	658.9	655.1	644.6	621.6	604.4
27.5°	629.3	623.5	612.1	579.5	559.5
30°	596.8	593.9	577.6	535.6	520.3
32.5°	566.2	561.4	544.2	500.2	487.7
35°	534.6	530.8	505.0	466.7	455.2
37.5°	503.0	498.3	465.7	435.1	420.8
40°	471.5	465.7	430.4	402.6	387.3
42.5°	441.8	434.2	399.8	370.1	352.9
45°	410.3	401.7	367.2	336.6	323.2
47.5°	378.7	371.1	339.5	307.9	292.6
50°	345.2	338.5	309.9	278.3	262.0
52.5°	317.5	307.0	279.3	247.7	234.3
55°	285.0	276.4	250.6	220.9	209.4
57.5°	255.3	246.7	222.8	195.1	185.5
60°	227.6	215.2	195.1	171.2	163.5
62.5°	197.0	187.4	170.2	150.1	159.7
65°	169.3	159.7	144.4	147.3	122.4
67.5°	138.7	133.9	120.5	107.1	103.3
70°	112.8	107.1	102.3	88.0	84.2
72.5°	89.9	84.2	77.5	69.8	66.9
75°	67.9	63.1	59.3	56.4	62.2
77.5°	46.9	44.9	42.1	39.2	38.3
80°	30.6	29.6	28.7	27.7	26.8
82.5°	18.2	18.2	18.2	18.2	18.2
85°	9.6	10.5	11.5	12.4	13.4
87.5°	5.7	5.7	6.7	7.7	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)