

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: P559093

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559093
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-80-86-EDD
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1889.0 lumens
Efficiency: N/A
Efficacy: 87.5 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

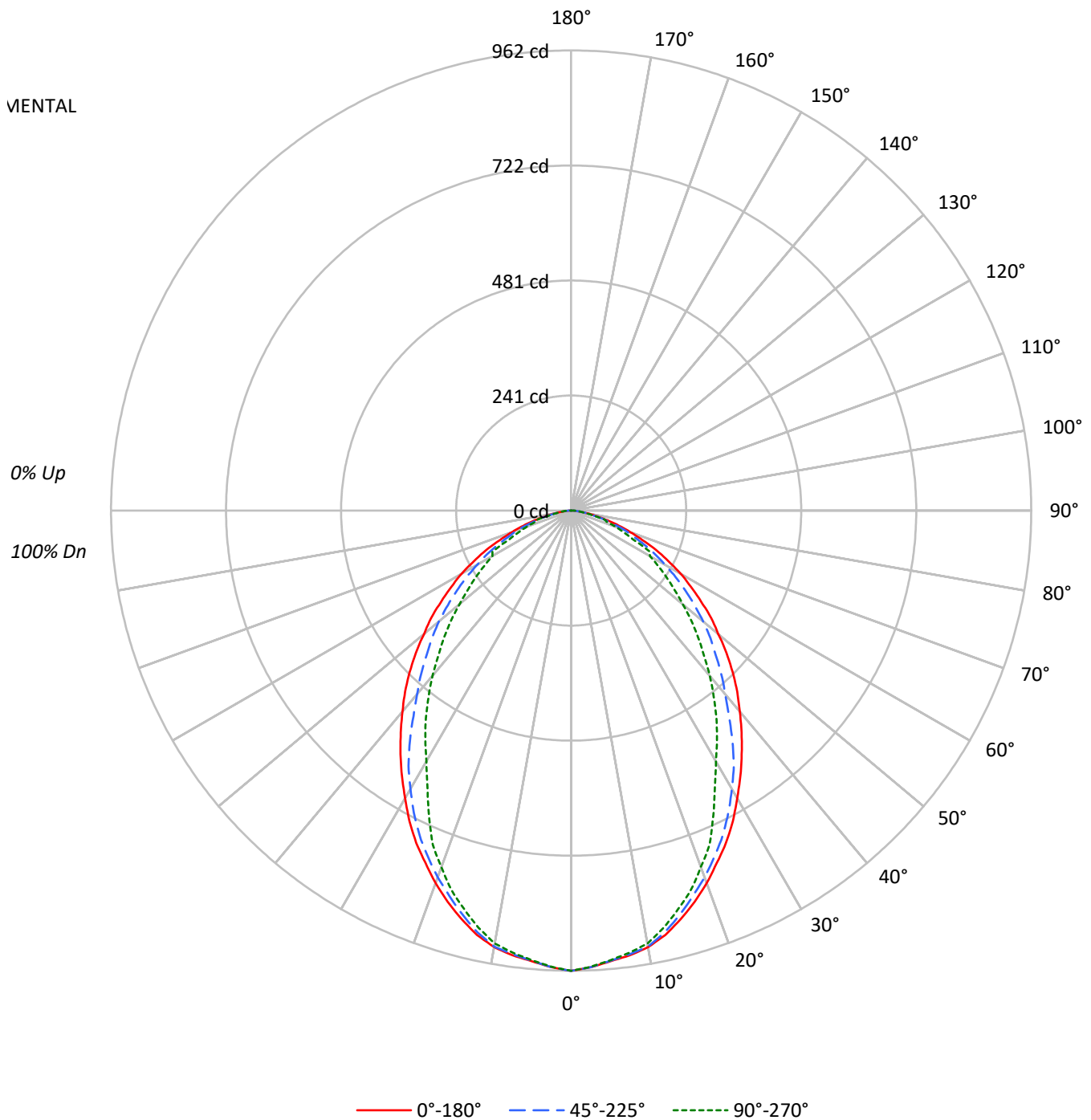
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10357	10357	10357
5°	10216	10204	10192
10°	10128	10116	10042
15°	9855	9756	9619
20°	9493	9340	9085
25°	9102	8905	8349
30°	8627	8351	7521
35°	8171	7719	6958
40°	7706	7034	6330
45°	7264	6503	5724
50°	6725	6035	5104
55°	6221	5470	4571
60°	5701	4885	4095
65°	5015	4279	3627
70°	4132	3745	3081
75°	3285	2870	3007
80°	2207	2070	1928
85°	1371	1643	1927

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7264 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.6	4.7
10°-20°	245.8	13.0
20°-30°	340.3	18.0
30°-40°	362.9	19.2
40°-50°	331.1	17.5
50°-60°	259.4	13.7
60°-70°	169.0	8.9
70°-80°	74.9	4.0
80°-90°	16.1	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°	675.7	35.8
0°-40°	1038.6	55.0
0°-60°	1629.0	86.2
0°-90°	1889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1889.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	962	962	962	962	962	
5°	946	944	944	943	943	90
15°	884	884	876	867	863	249
25°	766	762	750	723	703	352
35°	622	617	587	543	530	389
45°	477	467	427	392	376	368
55°	332	322	292	257	244	297
65°	197	186	168	171	142	194
75°	79	73	69	66	72	85
85°	11	12	13	14	16	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	962.2	962.2	962.2	962.2	962.2
2.5°	955.6	955.6	955.6	954.4	954.4
5°	945.5	944.4	944.4	943.3	943.3
7.5°	937.8	936.6	935.5	934.4	932.2
10°	926.6	926.6	925.5	920.0	918.8
12.5°	908.8	907.7	903.3	895.5	893.3
15°	884.4	884.4	875.5	866.6	863.2
17.5°	857.7	856.6	845.4	836.5	832.1
20°	828.7	826.5	815.4	800.9	793.1
22.5°	796.5	796.5	783.1	764.2	756.4
25°	766.4	762.0	749.8	723.1	703.0
27.5°	732.0	725.3	711.9	674.1	650.8
30°	694.1	690.8	671.9	622.9	605.1
32.5°	658.5	653.0	633.0	581.8	567.3
35°	621.8	617.4	587.4	542.9	529.5
37.5°	585.1	579.6	541.7	506.1	489.5
40°	548.4	541.7	500.6	468.3	450.5
42.5°	513.9	505.0	465.0	430.5	410.5
45°	477.2	467.2	427.2	391.6	376.0
47.5°	440.5	431.6	394.9	358.2	340.4
50°	401.6	393.8	360.4	323.7	304.8
52.5°	369.3	357.1	324.8	288.1	272.5
55°	331.5	321.5	291.5	257.0	243.6
57.5°	297.0	287.0	259.2	226.9	215.8
60°	264.8	250.3	226.9	199.1	190.2
62.5°	229.2	218.0	198.0	174.6	185.8
65°	196.9	185.8	168.0	171.3	142.4
67.5°	161.3	155.7	140.2	124.6	120.1
70°	131.3	124.6	119.0	102.3	97.9
72.5°	104.6	97.9	90.1	81.2	77.9
75°	79.0	73.4	69.0	65.6	72.3
77.5°	54.5	52.3	48.9	45.6	44.5
80°	35.6	34.5	33.4	32.3	31.1
82.5°	21.1	21.1	21.1	21.1	21.1
85°	11.1	12.2	13.3	14.5	15.6
87.5°	6.7	6.7	7.8	8.9	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)