

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: P559700

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559700
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-12-2-LD4-1HI-40-UNV-82-86-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1431.0 lumens
Efficiency: N/A
Efficacy: 66.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

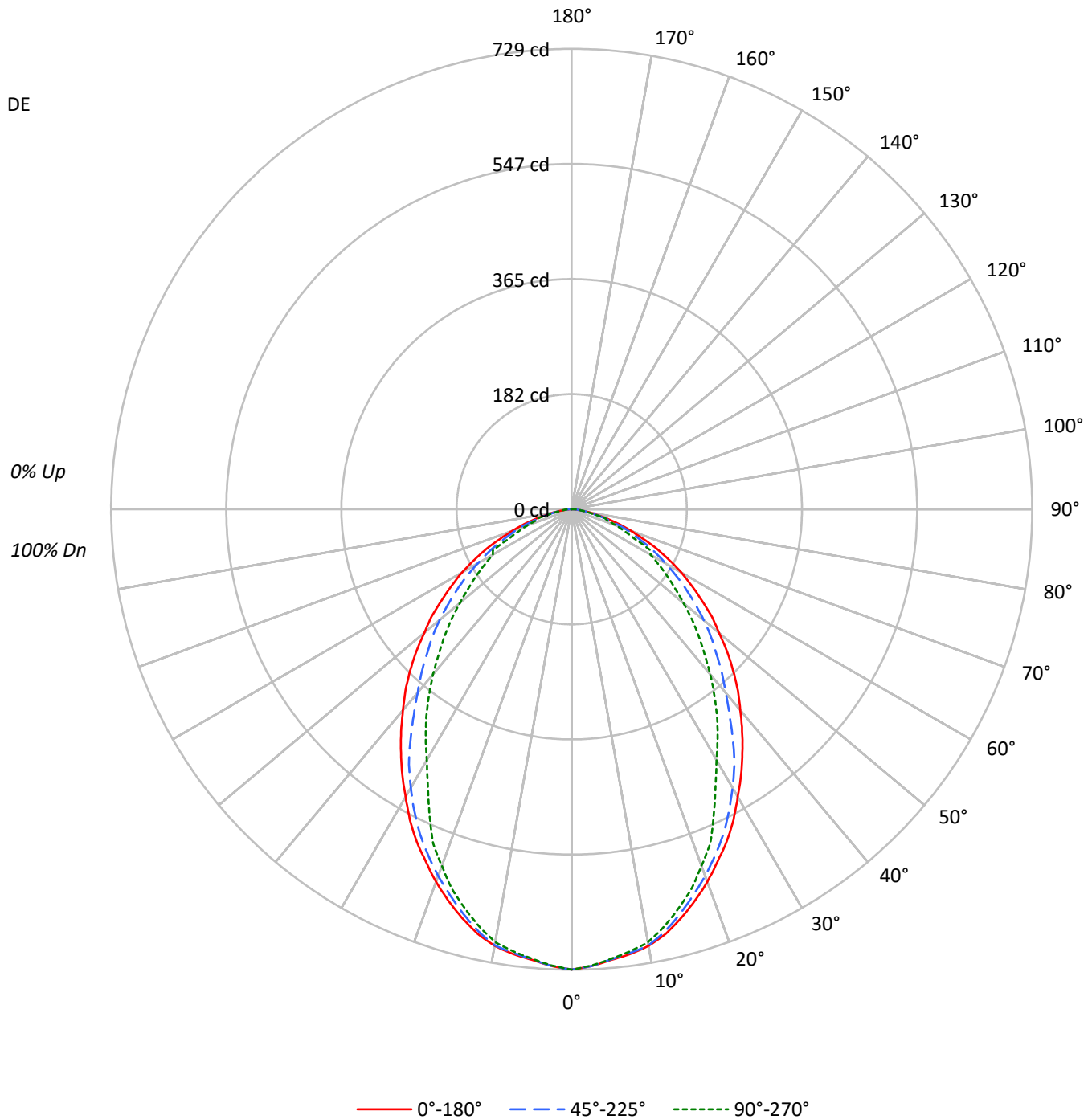
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3923	3923	3923
5°	3870	3865	3861
10°	3836	3831	3804
15°	3733	3695	3643
20°	3596	3538	3441
25°	3448	3373	3163
30°	3268	3163	2849
35°	3095	2923	2635
40°	2918	2664	2398
45°	2751	2463	2168
50°	2547	2286	1933
55°	2356	2072	1732
60°	2159	1850	1551
65°	1900	1620	1374
70°	1564	1419	1168
75°	1243	1085	1140
80°	837	784	731
85°	519	624	729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2751 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	4.7
10°-20°	186.2	13.0
20°-30°	257.8	18.0
30°-40°	274.9	19.2
40°-50°	250.8	17.5
50°-60°	196.5	13.7
60°-70°	128.1	8.9
70°-80°	56.7	4.0
80°-90°	12.2	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°	511.9	35.8
0°-40°	786.8	55.0
0°-60°	1234.0	86.2
0°-90°	1431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1431.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	729	729	729	729	729	
5°	716	715	715	715	715	68
15°	670	670	663	656	654	188
25°	581	577	568	548	533	267
35°	471	468	445	411	401	295
45°	362	354	324	297	285	278
55°	251	244	221	195	185	225
65°	149	141	127	130	108	147
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	728.9	728.9	728.9	728.9	728.9
2.5°	723.9	723.9	723.9	723.0	723.0
5°	716.3	715.4	715.4	714.6	714.6
7.5°	710.4	709.6	708.7	707.9	706.2
10°	702.0	702.0	701.1	696.9	696.1
12.5°	688.5	687.6	684.3	678.4	676.7
15°	669.9	669.9	663.2	656.5	653.9
17.5°	649.7	648.9	640.4	633.7	630.3
20°	627.8	626.1	617.7	606.7	600.8
22.5°	603.4	603.4	593.3	578.9	573.0
25°	580.6	577.2	568.0	547.8	532.6
27.5°	554.5	549.4	539.3	510.7	493.0
30°	525.8	523.3	509.0	471.9	458.4
32.5°	498.9	494.7	479.5	440.7	429.8
35°	471.1	467.7	444.9	411.2	401.1
37.5°	443.3	439.0	410.4	383.4	370.8
40°	415.4	410.4	379.2	354.8	341.3
42.5°	389.3	382.6	352.2	326.1	311.0
45°	361.5	353.9	323.6	296.6	284.8
47.5°	333.7	327.0	299.2	271.3	257.9
50°	304.2	298.3	273.0	245.2	230.9
52.5°	279.8	270.5	246.1	218.3	206.5
55°	251.1	243.5	220.8	194.7	184.6
57.5°	225.0	217.4	196.3	171.9	163.5
60°	200.6	189.6	171.9	150.8	144.1
62.5°	173.6	165.2	150.0	132.3	140.7
65°	149.2	140.7	127.2	129.8	107.9
67.5°	122.2	118.0	106.2	94.4	91.0
70°	99.4	94.4	90.2	77.5	74.2
72.5°	79.2	74.2	68.3	61.5	59.0
75°	59.8	55.6	52.2	49.7	54.8
77.5°	41.3	39.6	37.1	34.6	33.7
80°	27.0	26.1	25.3	24.4	23.6
82.5°	16.0	16.0	16.0	16.0	16.0
85°	8.4	9.3	10.1	11.0	11.8
87.5°	5.1	5.1	5.9	6.7	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)