

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: P559702

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559702
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-82-87-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1385.0 lumens
Efficiency: N/A
Efficacy: 64.1 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

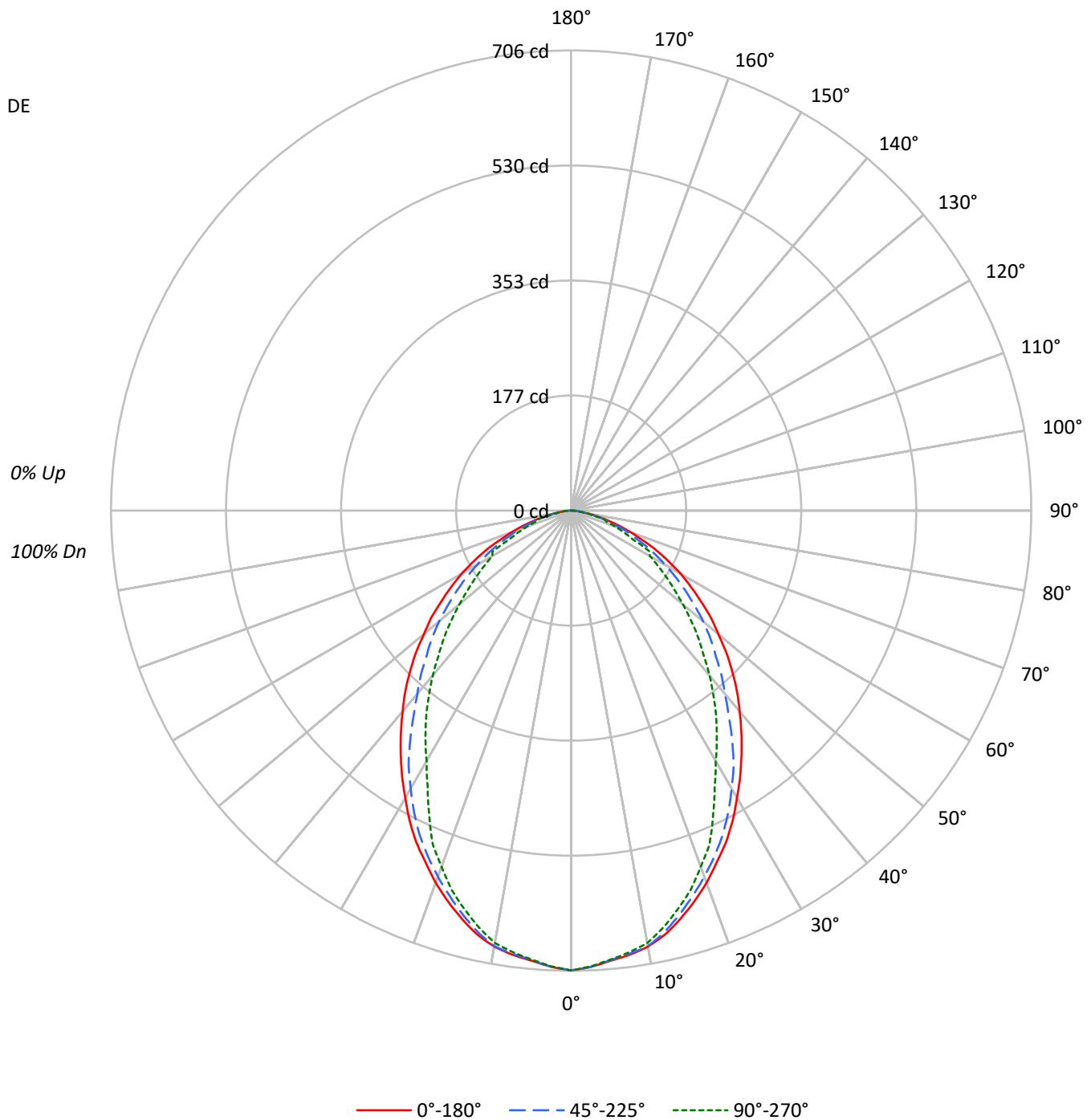
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3797	3797	3797
5°	3746	3741	3736
10°	3713	3709	3682
15°	3613	3577	3526
20°	3480	3424	3330
25°	3337	3264	3061
30°	3163	3061	2757
35°	2995	2829	2551
40°	2825	2578	2321
45°	2663	2384	2098
50°	2465	2213	1871
55°	2281	2005	1676
60°	2089	1791	1502
65°	1839	1569	1330
70°	1514	1374	1130
75°	1204	1052	1102
80°	809	759	707
85°	506	605	704

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2663 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.7	4.7
10°-20°	180.2	13.0
20°-30°	249.5	18.0
30°-40°	266.1	19.2
40°-50°	242.7	17.5
50°-60°	190.2	13.7
60°-70°	123.9	8.9
70°-80°	54.9	4.0
80°-90°	11.8	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°	495.4	35.8
0°-40°	761.5	55.0
0°-60°	1194.4	86.2
0°-90°	1385.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1385.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	693	692	692	692	692	66
15°	648	648	642	635	633	182
25°	562	559	550	530	516	258
35°	456	453	431	398	388	285
45°	350	343	313	287	276	270
55°	243	236	214	188	179	218
65°	144	136	123	126	104	142
75°	58	54	51	48	53	62
85°	8	9	10	11	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	705.5	705.5	705.5	705.5	705.5
2.5°	700.6	700.6	700.6	699.8	699.8
5°	693.3	692.5	692.5	691.6	691.6
7.5°	687.6	686.7	685.9	685.1	683.5
10°	679.4	679.4	678.6	674.5	673.7
12.5°	666.4	665.5	662.3	656.6	654.9
15°	648.4	648.4	641.9	635.4	632.9
17.5°	628.8	628.0	619.9	613.3	610.1
20°	607.6	606.0	597.8	587.2	581.5
22.5°	584.0	584.0	574.2	560.3	554.6
25°	562.0	558.7	549.7	530.1	515.5
27.5°	536.7	531.8	522.0	494.3	477.1
30°	508.9	506.5	492.6	456.7	443.7
32.5°	482.8	478.8	464.1	426.6	416.0
35°	455.9	452.7	430.6	398.0	388.2
37.5°	429.0	424.9	397.2	371.1	358.9
40°	402.1	397.2	367.0	343.4	330.3
42.5°	376.8	370.3	340.9	315.6	301.0
45°	349.9	342.6	313.2	287.1	275.7
47.5°	323.0	316.5	289.5	262.6	249.6
50°	294.4	288.7	264.3	237.3	223.5
52.5°	270.8	261.8	238.2	211.2	199.8
55°	243.1	235.7	213.7	188.4	178.6
57.5°	217.8	210.4	190.0	166.4	158.2
60°	194.1	183.5	166.4	146.0	139.5
62.5°	168.0	159.9	145.2	128.1	136.2
65°	144.4	136.2	123.2	125.6	104.4
67.5°	118.3	114.2	102.8	91.3	88.1
70°	96.2	91.3	87.3	75.0	71.8
72.5°	76.7	71.8	66.1	59.5	57.1
75°	57.9	53.8	50.6	48.1	53.0
77.5°	40.0	38.3	35.9	33.4	32.6
80°	26.1	25.3	24.5	23.7	22.8
82.5°	15.5	15.5	15.5	15.5	15.5
85°	8.2	9.0	9.8	10.6	11.4
87.5°	4.9	4.9	5.7	6.5	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)