

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: P559662

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559662
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-35-UNV-93-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1499.0 lumens
Efficiency: N/A
Efficacy: 69.4 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

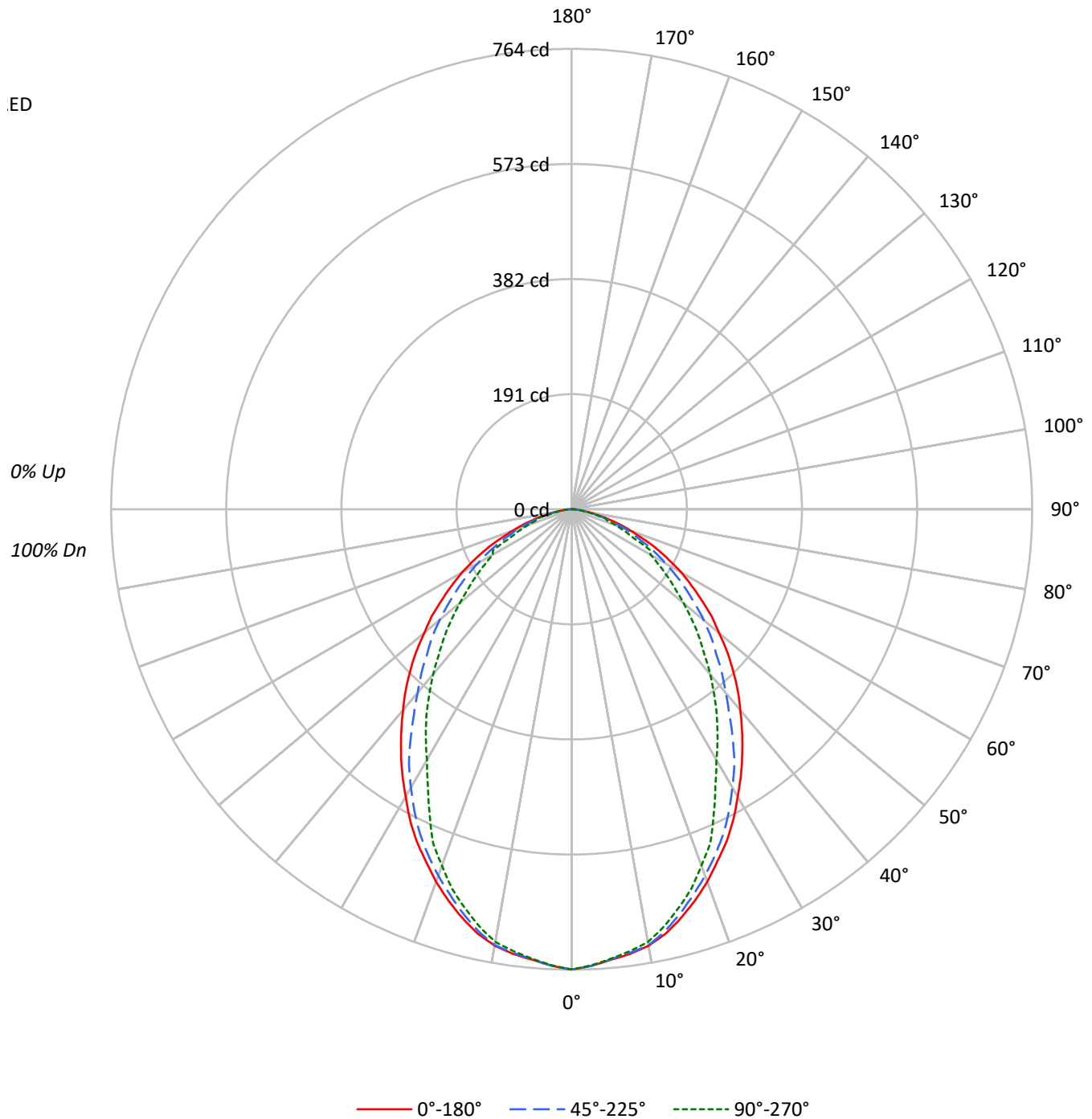
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4110	4110	4110
5°	4054	4049	4044
10°	4018	4013	3985
15°	3910	3871	3817
20°	3766	3706	3605
25°	3612	3533	3313
30°	3423	3314	2984
35°	3242	3062	2761
40°	3058	2791	2512
45°	2882	2580	2271
50°	2668	2395	2025
55°	2469	2170	1814
60°	2261	1939	1624
65°	1989	1698	1439
70°	1640	1487	1223
75°	1304	1137	1194
80°	874	821	766
85°	543	655	766

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2882 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.1	4.7
10°-20°	195.1	13.0
20°-30°	270.1	18.0
30°-40°	288.0	19.2
40°-50°	262.7	17.5
50°-60°	205.8	13.7
60°-70°	134.1	8.9
70°-80°	59.4	4.0
80°-90°	12.8	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°	536.2	35.8
0°-40°	824.2	55.0
0°-60°	1292.7	86.2
0°-90°	1499.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1499.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	764	764	764	764	764	
5°	750	749	749	749	749	71
15°	702	702	695	688	685	197
25°	608	605	595	574	558	279
35°	494	490	466	431	420	309
45°	379	371	339	311	298	292
55°	263	255	231	204	193	236
65°	156	147	133	136	113	154
75°	63	58	55	52	57	67
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	763.6	763.6	763.6	763.6	763.6
2.5°	758.3	758.3	758.3	757.4	757.4
5°	750.3	749.4	749.4	748.6	748.6
7.5°	744.2	743.3	742.4	741.5	739.7
10°	735.3	735.3	734.4	730.0	729.1
12.5°	721.2	720.3	716.8	710.6	708.8
15°	701.8	701.8	694.7	687.7	685.0
17.5°	680.6	679.7	670.9	663.8	660.3
20°	657.6	655.9	647.0	635.6	629.4
22.5°	632.0	632.0	621.4	606.4	600.3
25°	608.2	604.7	595.0	573.8	557.9
27.5°	580.8	575.5	565.0	534.9	516.4
30°	550.8	548.2	533.2	494.3	480.2
32.5°	522.6	518.2	502.3	461.7	450.2
35°	493.5	489.9	466.1	430.8	420.2
37.5°	464.3	459.9	429.9	401.6	388.4
40°	435.2	429.9	397.2	371.6	357.5
42.5°	407.8	400.8	369.0	341.6	325.7
45°	378.7	370.8	339.0	310.7	298.4
47.5°	349.6	342.5	313.4	284.2	270.1
50°	318.7	312.5	286.0	256.9	241.9
52.5°	293.1	283.4	257.8	228.6	216.3
55°	263.1	255.1	231.3	203.9	193.3
57.5°	235.7	227.7	205.7	180.1	171.3
60°	210.1	198.6	180.1	158.0	150.9
62.5°	181.8	173.0	157.1	138.6	147.4
65°	156.2	147.4	133.3	135.9	113.0
67.5°	128.0	123.6	111.2	98.9	95.3
70°	104.2	98.9	94.5	81.2	77.7
72.5°	83.0	77.7	71.5	64.4	61.8
75°	62.7	58.3	54.7	52.1	57.4
77.5°	43.3	41.5	38.8	36.2	35.3
80°	28.2	27.4	26.5	25.6	24.7
82.5°	16.8	16.8	16.8	16.8	16.8
85°	8.8	9.7	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)