

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: P559085

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559085
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-35-UNV-93-96-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1917.0 lumens
Efficiency: N/A
Efficacy: 88.7 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

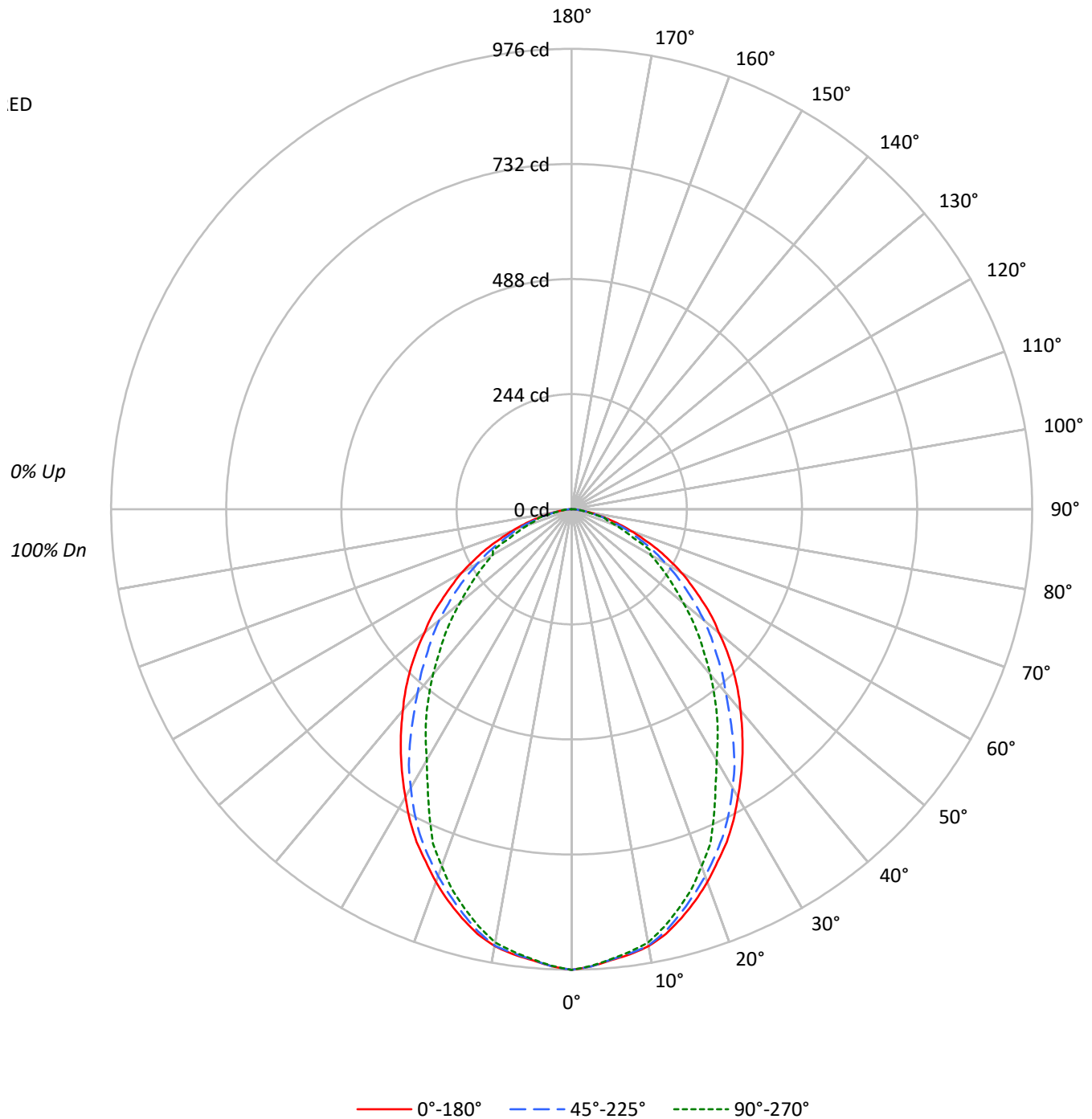
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10511	10511	10511
5°	10369	10356	10344
10°	10279	10265	10192
15°	10001	9900	9762
20°	9633	9479	9220
25°	9238	9037	8474
30°	8755	8475	7633
35°	8293	7833	7062
40°	7820	7138	6424
45°	7372	6599	5809
50°	6824	6126	5179
55°	6313	5551	4639
60°	5785	4958	4155
65°	5089	4343	3680
70°	4192	3802	3125
75°	3335	2911	3053
80°	2238	2101	1959
85°	1396	1667	1951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7372 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	4.7
10°-20°	249.5	13.0
20°-30°	345.4	18.0
30°-40°	368.3	19.2
40°-50°	336.0	17.5
50°-60°	263.2	13.7
60°-70°	171.5	8.9
70°-80°	76.0	4.0
80°-90°	16.3	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°	685.7	35.8
0°-40°	1054.0	55.0
0°-60°	1653.2	86.2
0°-90°	1917.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	976	976	976	976	976	
5°	960	958	958	957	957	91
15°	898	898	888	879	876	252
25°	778	773	761	734	714	357
35°	631	626	596	551	537	395
45°	484	474	434	397	382	373
55°	336	326	296	261	247	302
65°	200	188	170	174	144	197
75°	80	74	70	67	73	86
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	976.5	976.5	976.5	976.5	976.5
2.5°	969.7	969.7	969.7	968.6	968.6
5°	959.6	958.4	958.4	957.3	957.3
7.5°	951.7	950.5	949.4	948.3	946.0
10°	940.4	940.4	939.2	933.6	932.5
12.5°	922.3	921.2	916.7	908.8	906.5
15°	897.5	897.5	888.4	879.4	876.0
17.5°	870.4	869.2	858.0	848.9	844.4
20°	841.0	838.8	827.5	812.8	804.9
22.5°	808.3	808.3	794.7	775.6	767.6
25°	777.8	773.3	760.9	733.8	713.5
27.5°	742.8	736.0	722.5	684.1	660.4
30°	704.4	701.0	681.9	632.2	614.1
32.5°	668.3	662.7	642.3	590.4	575.7
35°	631.1	626.5	596.1	550.9	537.4
37.5°	593.8	588.2	549.8	513.6	496.7
40°	556.5	549.8	508.0	475.3	457.2
42.5°	521.5	512.5	471.9	436.9	416.6
45°	484.3	474.1	433.5	397.4	381.6
47.5°	447.0	438.0	400.8	363.5	345.4
50°	407.5	399.6	365.8	328.5	309.3
52.5°	374.8	362.4	329.6	292.4	276.6
55°	336.4	326.3	295.8	260.8	247.2
57.5°	301.4	291.3	263.0	230.3	219.0
60°	268.7	254.0	230.3	202.1	193.0
62.5°	232.6	221.3	200.9	177.2	188.5
65°	199.8	188.5	170.5	173.8	144.5
67.5°	163.7	158.0	142.2	126.4	121.9
70°	133.2	126.4	120.8	103.9	99.3
72.5°	106.1	99.3	91.4	82.4	79.0
75°	80.2	74.5	70.0	66.6	73.4
77.5°	55.3	53.1	49.7	46.3	45.2
80°	36.1	35.0	33.9	32.7	31.6
82.5°	21.4	21.4	21.4	21.4	21.4
85°	11.3	12.4	13.5	14.7	15.8
87.5°	6.8	6.8	7.9	9.0	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)