

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: P559202

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559202
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-50-UNV-93-85-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1694.0 lumens
Efficiency: N/A
Efficacy: 78.4 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

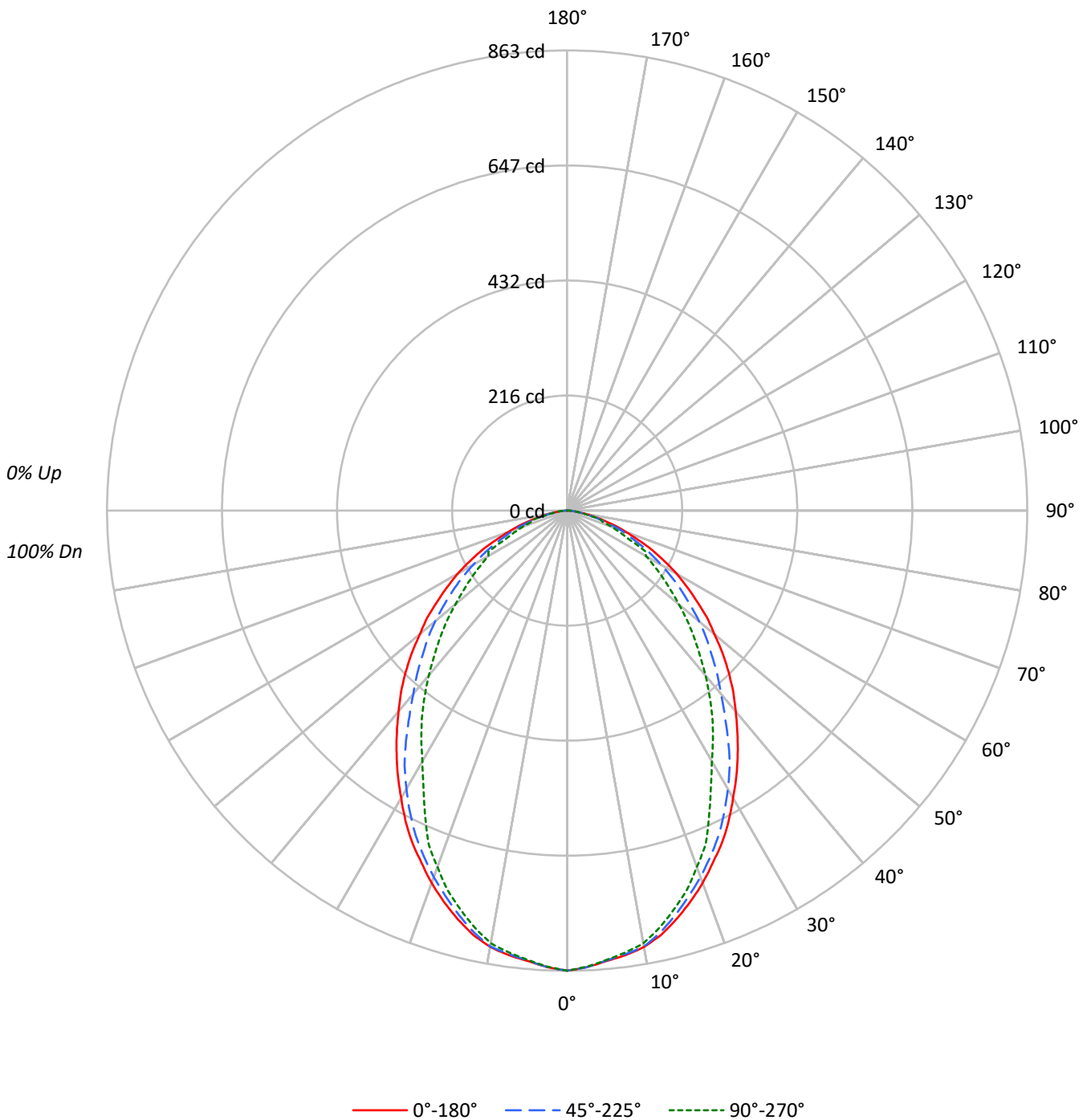
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9288	9288	9288
5°	9162	9151	9140
10°	9083	9072	9006
15°	8838	8749	8626
20°	8513	8376	8148
25°	8163	7986	7488
30°	7737	7489	6745
35°	7327	6921	6239
40°	6910	6308	5677
45°	6515	5832	5133
50°	6030	5412	4577
55°	5579	4906	4100
60°	5111	4381	3673
65°	4498	3836	3252
70°	3704	3358	2763
75°	2944	2570	2695
80°	1977	1853	1729
85°	1235	1482	1729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6515 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.3	4.7
10°-20°	220.4	13.0
20°-30°	305.2	18.0
30°-40°	325.4	19.2
40°-50°	296.9	17.5
50°-60°	232.6	13.7
60°-70°	151.6	8.9
70°-80°	67.1	4.0
80°-90°	14.4	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°	606.0	35.8
0°-40°	931.4	55.0
0°-60°	1460.8	86.2
0°-90°	1694.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1694.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	848	847	847	846	846	80
15°	793	793	785	777	774	223
25°	687	683	672	648	630	316
35°	558	554	527	487	475	349
45°	428	419	383	351	337	330
55°	297	288	261	230	218	267
65°	177	167	151	154	128	174
75°	71	66	62	59	65	76
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.9	862.9	862.9	862.9	862.9
2.5°	856.9	856.9	856.9	855.9	855.9
5°	847.9	846.9	846.9	845.9	845.9
7.5°	841.0	840.0	839.0	838.0	836.0
10°	831.0	831.0	830.0	825.0	824.0
12.5°	815.0	814.0	810.0	803.0	801.1
15°	793.1	793.1	785.1	777.1	774.1
17.5°	769.1	768.1	758.2	750.2	746.2
20°	743.2	741.2	731.2	718.3	711.3
22.5°	714.3	714.3	702.3	685.3	678.3
25°	687.3	683.3	672.4	648.4	630.5
27.5°	656.4	650.4	638.4	604.5	583.6
30°	622.5	619.5	602.5	558.6	542.7
32.5°	590.6	585.6	567.6	521.7	508.8
35°	557.6	553.7	526.7	486.8	474.8
37.5°	524.7	519.7	485.8	453.9	438.9
40°	491.8	485.8	448.9	420.0	404.0
42.5°	460.9	452.9	417.0	386.1	368.1
45°	428.0	419.0	383.1	351.1	337.2
47.5°	395.0	387.1	354.1	321.2	305.3
50°	360.1	353.1	323.2	290.3	273.3
52.5°	331.2	320.2	291.3	258.4	244.4
55°	297.3	288.3	261.4	230.4	218.5
57.5°	266.4	257.4	232.4	203.5	193.5
60°	237.4	224.5	203.5	178.6	170.6
62.5°	205.5	195.5	177.6	156.6	166.6
65°	176.6	166.6	150.6	153.6	127.7
67.5°	144.6	139.7	125.7	111.7	107.7
70°	117.7	111.7	106.7	91.8	87.8
72.5°	93.8	87.8	80.8	72.8	69.8
75°	70.8	65.8	61.8	58.9	64.8
77.5°	48.9	46.9	43.9	40.9	39.9
80°	31.9	30.9	29.9	28.9	27.9
82.5°	19.0	19.0	19.0	19.0	19.0
85°	10.0	11.0	12.0	13.0	14.0
87.5°	6.0	6.0	7.0	8.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)