

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: P559678

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559678
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-80-97-EDD-90
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1517.0 lumens
Efficiency: N/A
Efficacy: 70.2 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

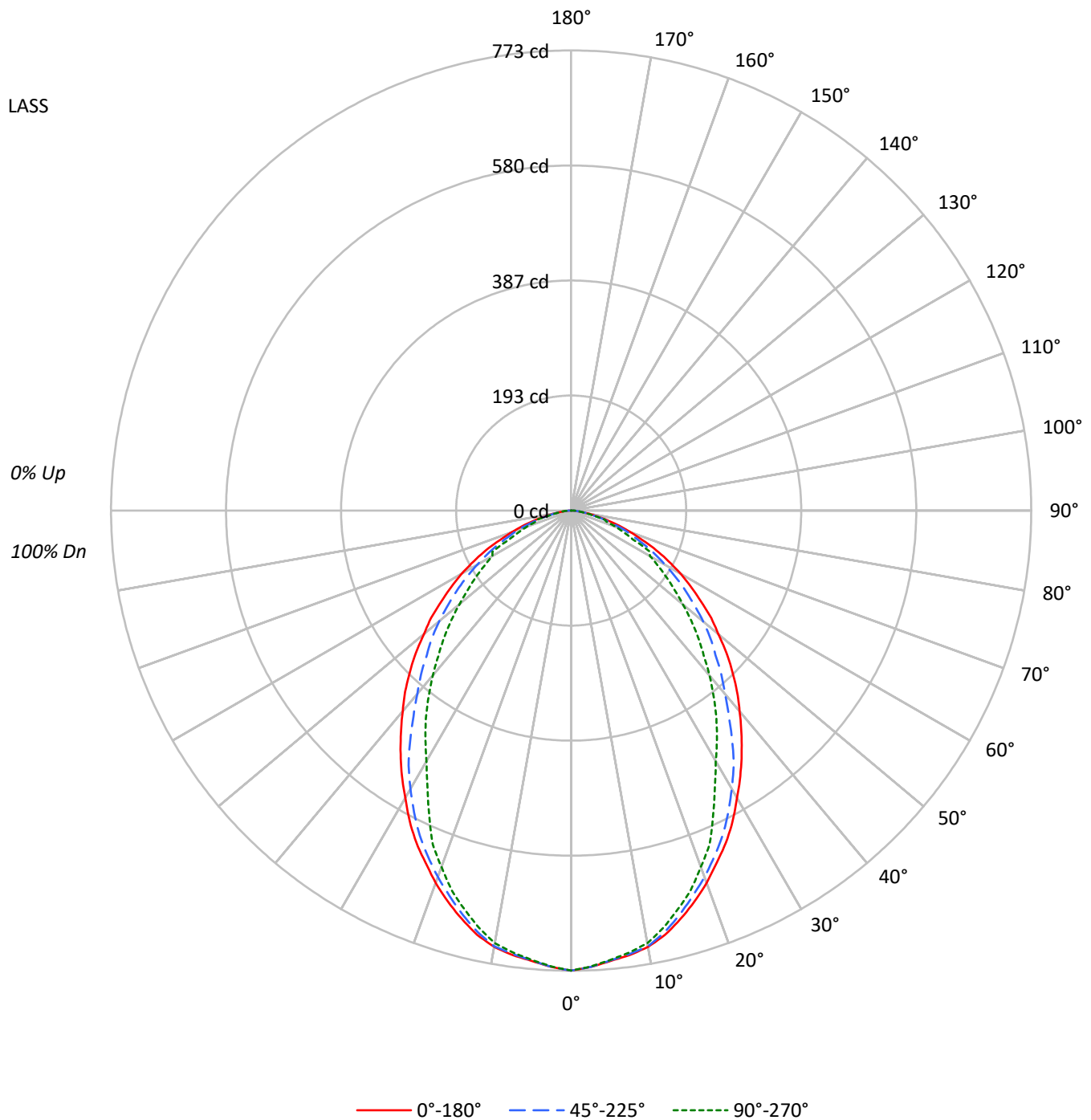
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4159	4159	4159
5°	4102	4097	4093
10°	4067	4062	4033
15°	3957	3918	3862
20°	3812	3750	3648
25°	3655	3575	3353
30°	3464	3353	3020
35°	3281	3099	2794
40°	3094	2824	2542
45°	2917	2611	2298
50°	2700	2423	2050
55°	2498	2197	1835
60°	2288	1961	1645
65°	2013	1718	1456
70°	1659	1504	1237
75°	1318	1152	1208
80°	886	831	775
85°	550	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2917 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.9	4.7
10°-20°	197.4	13.0
20°-30°	273.3	18.0
30°-40°	291.4	19.2
40°-50°	265.9	17.5
50°-60°	208.3	13.7
60°-70°	135.8	8.9
70°-80°	60.1	4.0
80°-90°	12.9	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°	542.6	35.8
0°-40°	834.1	55.0
0°-60°	1308.2	86.2
0°-90°	1517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	759	758	758	758	758	72
15°	710	710	703	696	693	200
25°	616	612	602	581	565	283
35°	499	496	472	436	425	312
45°	383	375	343	314	302	295
55°	266	258	234	206	196	239
65°	158	149	135	138	114	156
75°	63	59	55	53	58	68
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°	772.7	772.7	772.7	772.7	772.7
2.5°	767.4	767.4	767.4	766.5	766.5
5°	759.3	758.4	758.4	757.6	757.6
7.5°	753.1	752.2	751.3	750.4	748.6
10°	744.2	744.2	743.3	738.8	737.9
12.5°	729.9	729.0	725.4	719.1	717.4
15°	710.2	710.2	703.1	695.9	693.2
17.5°	688.8	687.9	678.9	671.8	668.2
20°	665.5	663.8	654.8	643.2	637.0
22.5°	639.6	639.6	628.9	613.7	607.5
25°	615.5	611.9	602.1	580.7	564.6
27.5°	587.8	582.5	571.7	541.4	522.6
30°	557.4	554.8	539.6	500.3	486.0
32.5°	528.9	524.4	508.3	467.2	455.6
35°	499.4	495.8	471.7	436.0	425.2
37.5°	469.9	465.4	435.1	406.5	393.1
40°	440.4	435.1	402.0	376.1	361.8
42.5°	412.7	405.6	373.4	345.7	329.6
45°	383.2	375.2	343.0	314.5	301.9
47.5°	353.8	346.6	317.1	287.7	273.4
50°	322.5	316.2	289.4	260.0	244.8
52.5°	296.6	286.8	260.9	231.4	218.9
55°	266.2	258.2	234.1	206.4	195.6
57.5°	238.5	230.5	208.1	182.2	173.3
60°	212.6	201.0	182.2	159.9	152.8
62.5°	184.0	175.1	159.0	140.3	149.2
65°	158.1	149.2	134.9	137.6	114.3
67.5°	129.5	125.1	112.6	100.1	96.5
70°	105.4	100.1	95.6	82.2	78.6
72.5°	84.0	78.6	72.4	65.2	62.5
75°	63.4	59.0	55.4	52.7	58.1
77.5°	43.8	42.0	39.3	36.6	35.7
80°	28.6	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.3	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)