

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: P560445

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560445
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-LD4-2LO-40-UNV-80-96-EDD
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

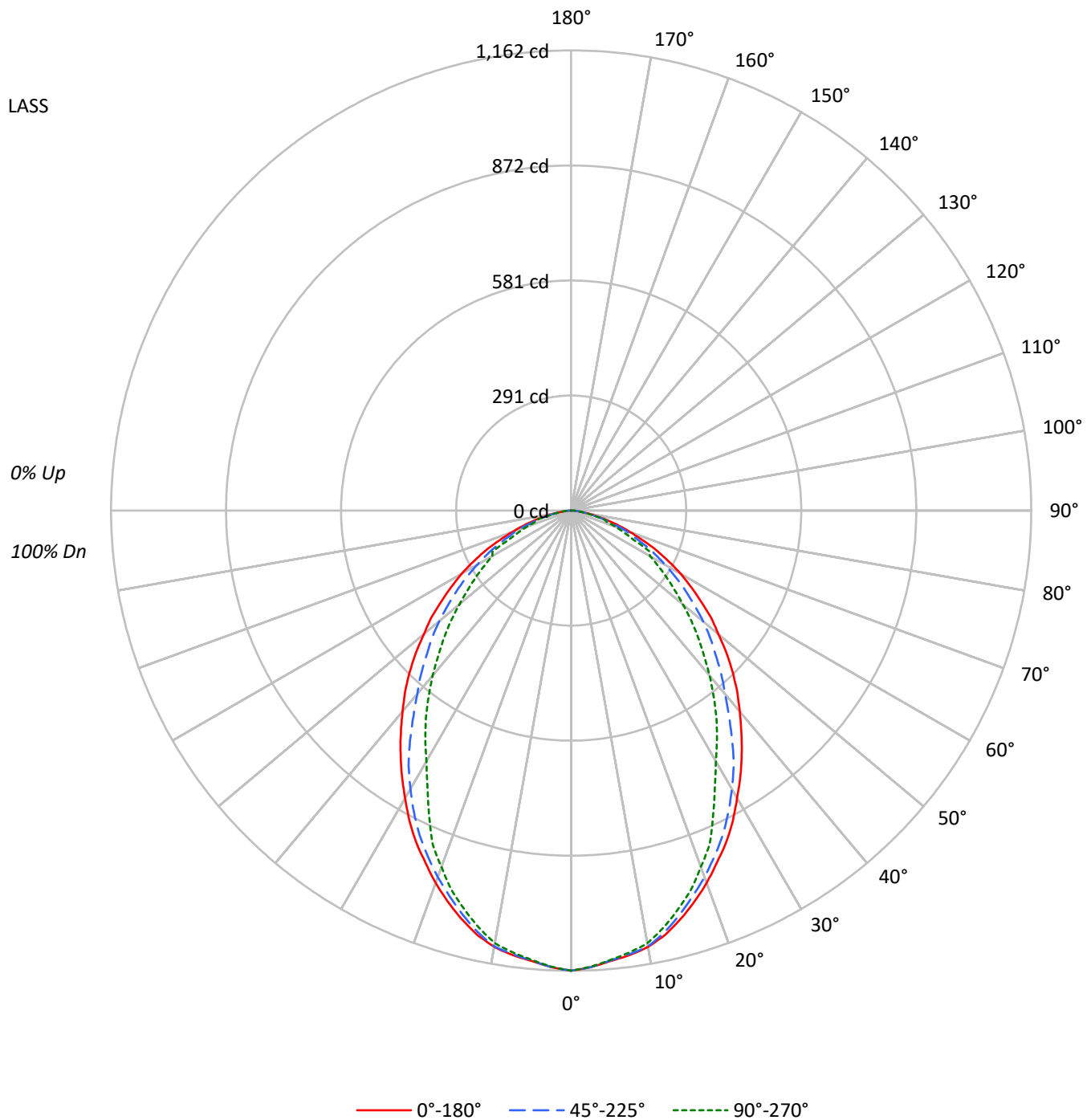
Lumens per Lamp: N/A
Luminaire Lumens: 2281.0 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	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°	6253	6253	6253
5°	6169	6161	6154
10°	6115	6108	6063
15°	5950	5890	5808
20°	5731	5639	5485
25°	5496	5377	5041
30°	5209	5042	4541
35°	4934	4660	4201
40°	4652	4247	3822
45°	4386	3926	3456
50°	4060	3644	3082
55°	3756	3302	2761
60°	3441	2949	2472
65°	3028	2583	2189
70°	2494	2261	1860
75°	1984	1732	1815
80°	1333	1249	1165
85°	827	994	1161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4386 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	4.7
10°-20°	296.8	13.0
20°-30°	410.9	18.0
30°-40°	438.2	19.2
40°-50°	399.8	17.5
50°-60°	313.2	13.7
60°-70°	204.1	8.9
70°-80°	90.4	4.0
80°-90°	19.4	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°	815.9	35.8
0°-40°	1254.1	55.0
0°-60°	1967.0	86.2
0°-90°	2281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1142	1140	1140	1139	1139	108
15°	1068	1068	1057	1046	1042	300
25°	926	920	905	873	849	425
35°	751	746	709	656	639	469
45°	576	564	516	473	454	444
55°	400	388	352	310	294	359
65°	238	224	203	207	172	234
75°	95	89	83	79	87	102
85°	13	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	<i>1161.9</i>	<i>1161.9</i>	<i>1161.9</i>	<i>1161.9</i>	<i>1161.9</i>
2.5°	<i>1153.9</i>	1153.9	1153.9	1152.5	1152.5
5°	<i>1141.8</i>	1140.4	1140.4	1139.1	1139.1
7.5°	<i>1132.4</i>	1131.0	1129.7	1128.3	1125.6
10°	<i>1118.9</i>	1118.9	1117.6	1110.9	1109.5
12.5°	<i>1097.4</i>	1096.1	1090.7	1081.3	1078.6
15°	<i>1067.9</i>	1067.9	1057.1	1046.4	1042.4
17.5°	<i>1035.6</i>	1034.3	1020.9	1010.1	1004.8
20°	<i>1000.7</i>	998.0	984.6	967.1	957.7
22.5°	<i>961.8</i>	961.8	945.6	922.8	913.4
25°	<i>925.5</i>	920.1	905.4	873.1	848.9
27.5°	<i>883.9</i>	875.8	859.7	814.0	785.8
30°	<i>838.2</i>	834.2	811.3	752.2	730.7
32.5°	<i>795.2</i>	788.5	764.3	702.5	685.1
35°	<i>750.9</i>	745.5	709.2	655.5	639.4
37.5°	<i>706.5</i>	699.8	654.2	611.2	591.0
40°	<i>662.2</i>	654.2	604.5	565.5	544.0
42.5°	<i>620.6</i>	609.8	561.5	519.8	495.7
45°	<i>576.3</i>	564.2	515.8	472.8	454.0
47.5°	<i>531.9</i>	521.2	476.9	432.5	411.0
50°	<i>484.9</i>	475.5	435.2	390.9	368.1
52.5°	<i>446.0</i>	431.2	392.2	347.9	329.1
55°	<i>400.3</i>	388.2	351.9	310.3	294.2
57.5°	<i>358.6</i>	346.6	313.0	274.0	260.6
60°	<i>319.7</i>	302.2	274.0	240.4	229.7
62.5°	<i>276.7</i>	263.3	239.1	210.9	224.3
65°	<i>237.8</i>	224.3	202.8	206.9	171.9
67.5°	<i>194.8</i>	188.1	169.2	150.4	145.1
70°	<i>158.5</i>	150.4	143.7	123.6	118.2
72.5°	<i>126.3</i>	118.2	108.8	98.1	94.0
75°	<i>95.4</i>	88.7	83.3	79.3	87.3
77.5°	<i>65.8</i>	63.1	59.1	55.1	53.7
80°	<i>43.0</i>	41.6	40.3	39.0	37.6
82.5°	<i>25.5</i>	25.5	25.5	25.5	25.5
85°	<i>13.4</i>	14.8	16.1	17.5	18.8
87.5°	<i>8.1</i>	8.1	9.4	10.7	12.1
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)