

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: P560509

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560509
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2319.0 lumens
Efficiency: N/A
Efficacy: 99.1 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

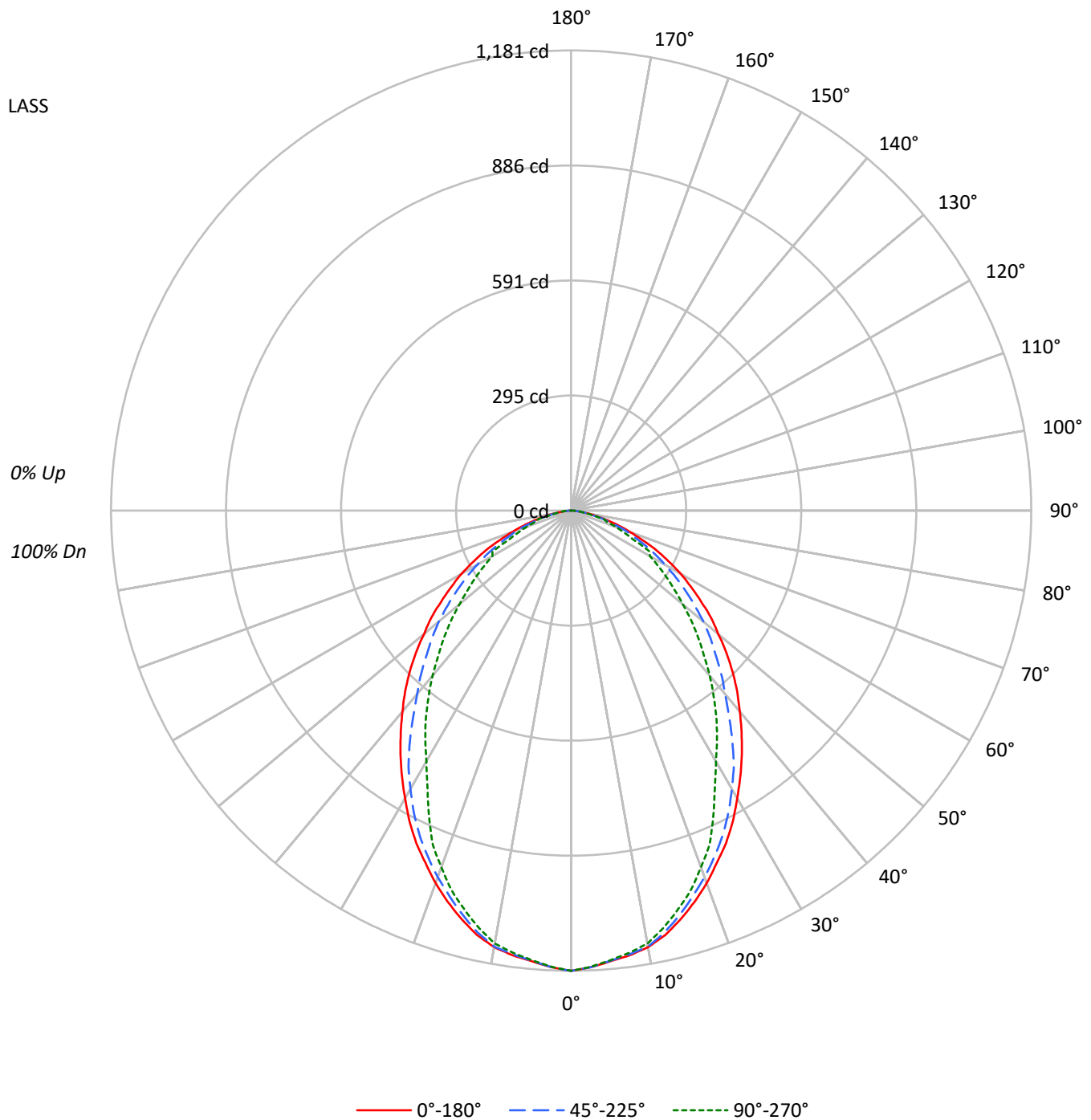
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6358	6358	6358
5°	6271	6264	6257
10°	6217	6209	6165
15°	6049	5988	5904
20°	5827	5733	5577
25°	5587	5466	5125
30°	5296	5126	4617
35°	5016	4738	4271
40°	4730	4317	3886
45°	4459	3991	3513
50°	4128	3705	3133
55°	3819	3357	2807
60°	3498	2999	2513
65°	3078	2626	2226
70°	2535	2299	1891
75°	2017	1761	1847
80°	1354	1271	1184
85°	846	1013	1179

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4459 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	4.7
10°-20°	301.8	13.0
20°-30°	417.8	18.0
30°-40°	445.5	19.2
40°-50°	406.4	17.5
50°-60°	318.4	13.7
60°-70°	207.5	8.9
70°-80°	91.9	4.0
80°-90°	19.7	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°	829.5	35.8
0°-40°	1275.0	55.0
0°-60°	1999.8	86.2
0°-90°	2319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2319.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1161	1159	1159	1158	1158	110
15°	1086	1086	1075	1064	1060	305
25°	941	936	920	888	863	432
35°	763	758	721	666	650	477
45°	586	574	524	481	462	451
55°	407	395	358	316	299	365
65°	242	228	206	210	175	238
75°	97	90	85	81	89	104
85°	14	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>1181.3</i>	<i>1181.3</i>	<i>1181.3</i>	<i>1181.3</i>	<i>1181.3</i>
2.5°	<i>1173.1</i>	1173.1	1173.1	1171.7	1171.7
5°	<i>1160.8</i>	1159.4	1159.4	1158.1	1158.1
7.5°	<i>1151.2</i>	1149.9	1148.5	1147.1	1144.4
10°	<i>1137.6</i>	1137.6	1136.2	1129.4	1128.0
12.5°	<i>1115.7</i>	1114.4	1108.9	1099.3	1096.6
15°	<i>1085.7</i>	1085.7	1074.7	1063.8	1059.7
17.5°	<i>1052.9</i>	1051.5	1037.9	1027.0	1021.5
20°	<i>1017.4</i>	1014.7	1001.0	983.3	973.7
22.5°	<i>977.8</i>	977.8	961.4	938.2	928.6
25°	<i>940.9</i>	935.5	920.4	887.7	863.1
27.5°	<i>898.6</i>	890.4	874.0	827.6	798.9
30°	<i>852.2</i>	848.1	824.8	764.8	742.9
32.5°	<i>808.5</i>	801.6	777.0	714.2	696.5
35°	<i>763.4</i>	757.9	721.1	666.4	650.0
37.5°	<i>718.3</i>	711.5	665.1	621.4	600.9
40°	<i>673.3</i>	665.1	614.5	574.9	553.1
42.5°	<i>630.9</i>	620.0	570.8	528.5	503.9
45°	<i>585.9</i>	573.6	524.4	480.7	461.6
47.5°	<i>540.8</i>	529.9	484.8	439.7	417.9
50°	<i>493.0</i>	483.4	442.5	397.4	374.2
52.5°	<i>453.4</i>	438.4	398.8	353.7	334.6
55°	<i>407.0</i>	394.7	357.8	315.5	299.1
57.5°	<i>364.6</i>	352.3	318.2	278.6	264.9
60°	<i>325.0</i>	307.3	278.6	244.4	233.5
62.5°	<i>281.3</i>	267.7	243.1	214.4	228.1
65°	<i>241.7</i>	228.1	206.2	210.3	174.8
67.5°	<i>198.0</i>	191.2	172.1	153.0	147.5
70°	<i>161.1</i>	153.0	146.1	125.6	120.2
72.5°	<i>128.4</i>	120.2	110.6	99.7	95.6
75°	<i>97.0</i>	90.1	84.7	80.6	88.8
77.5°	<i>66.9</i>	64.2	60.1	56.0	54.6
80°	<i>43.7</i>	42.3	41.0	39.6	38.2
82.5°	<i>25.9</i>	25.9	25.9	25.9	25.9
85°	<i>13.7</i>	15.0	16.4	17.8	19.1
87.5°	<i>8.2</i>	8.2	9.6	10.9	12.3
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)