

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: P560955

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-80-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560955  
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-12-4-LD4-1LO-35-UNV-80-94-EDD  
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

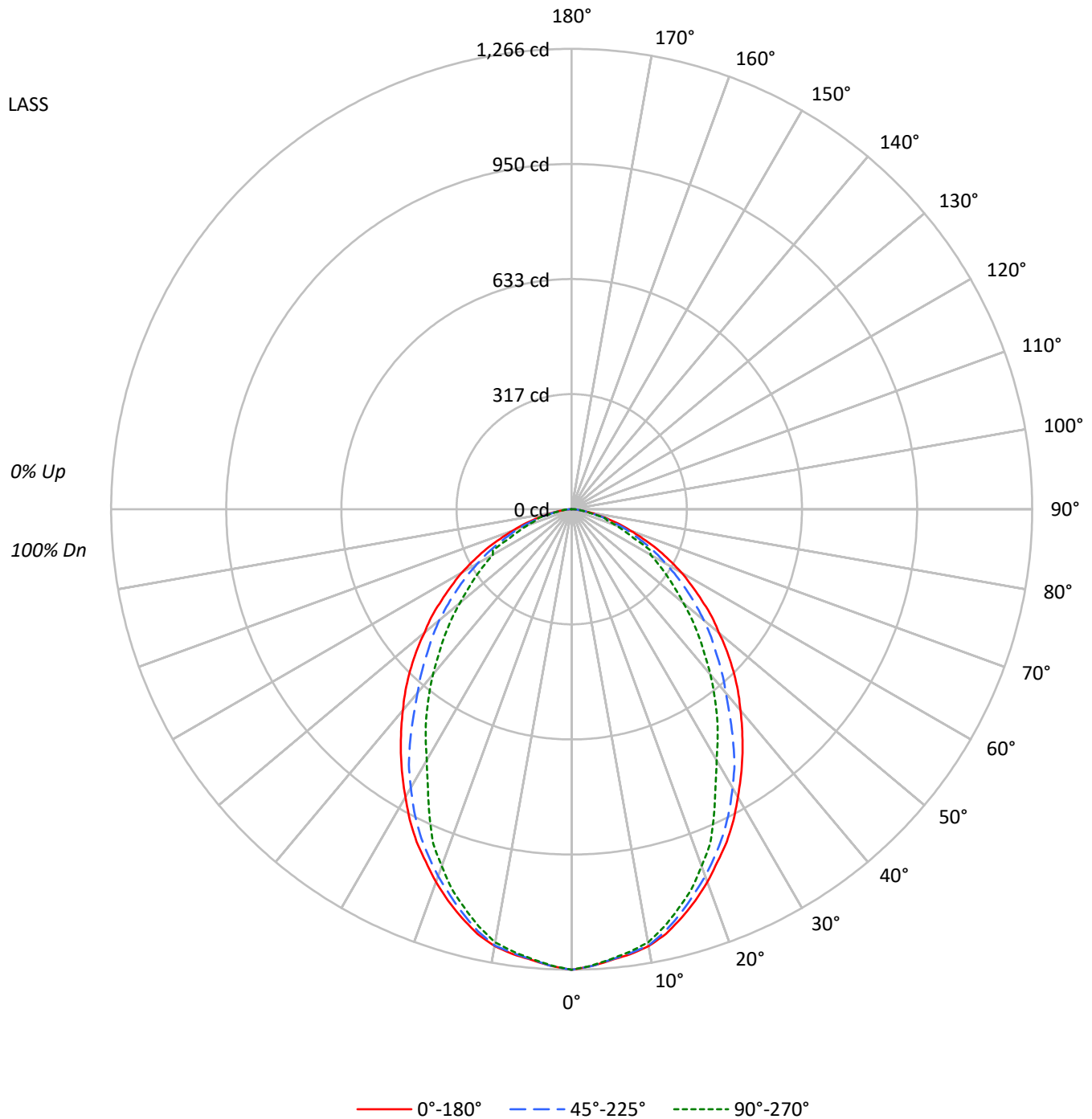
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2486.0 lumens  
Efficiency: N/A  
Efficacy: 106.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 4' 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	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°	3408	3408	3408
5°	3361	3357	3353
10°	3332	3328	3304
15°	3243	3210	3165
20°	3123	3073	2989
25°	2995	2930	2747
30°	2838	2747	2475
35°	2689	2539	2289
40°	2535	2314	2083
45°	2390	2140	1883
50°	2213	1986	1679
55°	2047	1800	1504
60°	1875	1608	1347
65°	1650	1408	1193
70°	1359	1232	1013
75°	1080	944	990
80°	725	680	635
85°	451	543	633

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2390 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.9	4.7
10°-20°	323.5	13.0
20°-30°	447.9	18.0
30°-40°	477.6	19.2
40°-50°	435.7	17.5
50°-60°	341.3	13.7
60°-70°	222.5	8.9
70°-80°	98.6	4.0
80°-90°	21.2	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°	889.3	35.8
0°-40°	1366.8	55.0
0°-60°	2143.8	86.2
0°-90°	2486.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2486.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1266	1266	1266	1266	1266	
5°	1244	1243	1243	1241	1241	118
15°	1164	1164	1152	1140	1136	327
25°	1009	1003	987	952	925	463
35°	818	812	773	714	697	512
45°	628	615	562	515	495	484
55°	436	423	384	338	321	391
65°	259	244	221	226	187	255
75°	104	97	91	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1266.3	1266.3	1266.3	1266.3	1266.3
2.5°	1257.6	1257.6	1257.6	1256.1	1256.1
5°	1244.4	1242.9	1242.9	1241.4	1241.4
7.5°	1234.1	1232.7	1231.2	1229.7	1226.8
10°	1219.5	1219.5	1218.0	1210.7	1209.2
12.5°	1196.1	1194.6	1188.7	1178.5	1175.6
15°	1163.9	1163.9	1152.1	1140.4	1136.0
17.5°	1128.7	1127.3	1112.6	1100.9	1095.1
20°	1090.7	1087.7	1073.1	1054.1	1043.8
22.5°	1048.2	1048.2	1030.6	1005.7	995.5
25°	1008.7	1002.8	986.7	951.6	925.2
27.5°	963.3	954.5	936.9	887.2	856.4
30°	913.5	909.1	884.2	819.8	796.4
32.5°	866.7	859.4	833.0	765.7	746.6
35°	818.4	812.5	773.0	714.4	696.9
37.5°	770.0	762.7	713.0	666.1	644.1
40°	721.7	713.0	658.8	616.3	592.9
42.5°	676.4	664.6	611.9	566.6	540.2
45°	628.0	614.9	562.2	515.3	494.8
47.5°	579.7	568.0	519.7	471.4	448.0
50°	528.5	518.2	474.3	426.0	401.1
52.5°	486.0	469.9	427.5	379.2	358.7
55°	436.3	423.1	383.6	338.2	320.6
57.5°	390.9	377.7	341.1	298.7	284.0
60°	348.4	329.4	298.7	262.1	250.3
62.5°	301.6	286.9	260.6	229.8	244.5
65°	259.1	244.5	221.1	225.5	187.4
67.5°	212.3	205.0	184.5	164.0	158.1
70°	172.7	164.0	156.6	134.7	128.8
72.5°	137.6	128.8	118.6	106.9	102.5
75°	103.9	96.6	90.8	86.4	95.2
77.5°	71.7	68.8	64.4	60.0	58.6
80°	46.8	45.4	43.9	42.5	41.0
82.5°	27.8	27.8	27.8	27.8	27.8
85°	14.6	16.1	17.6	19.0	20.5
87.5°	8.8	8.8	10.2	11.7	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)