

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: P560547

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560547
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-93-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2298.0 lumens
Efficiency: N/A
Efficacy: 98.2 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

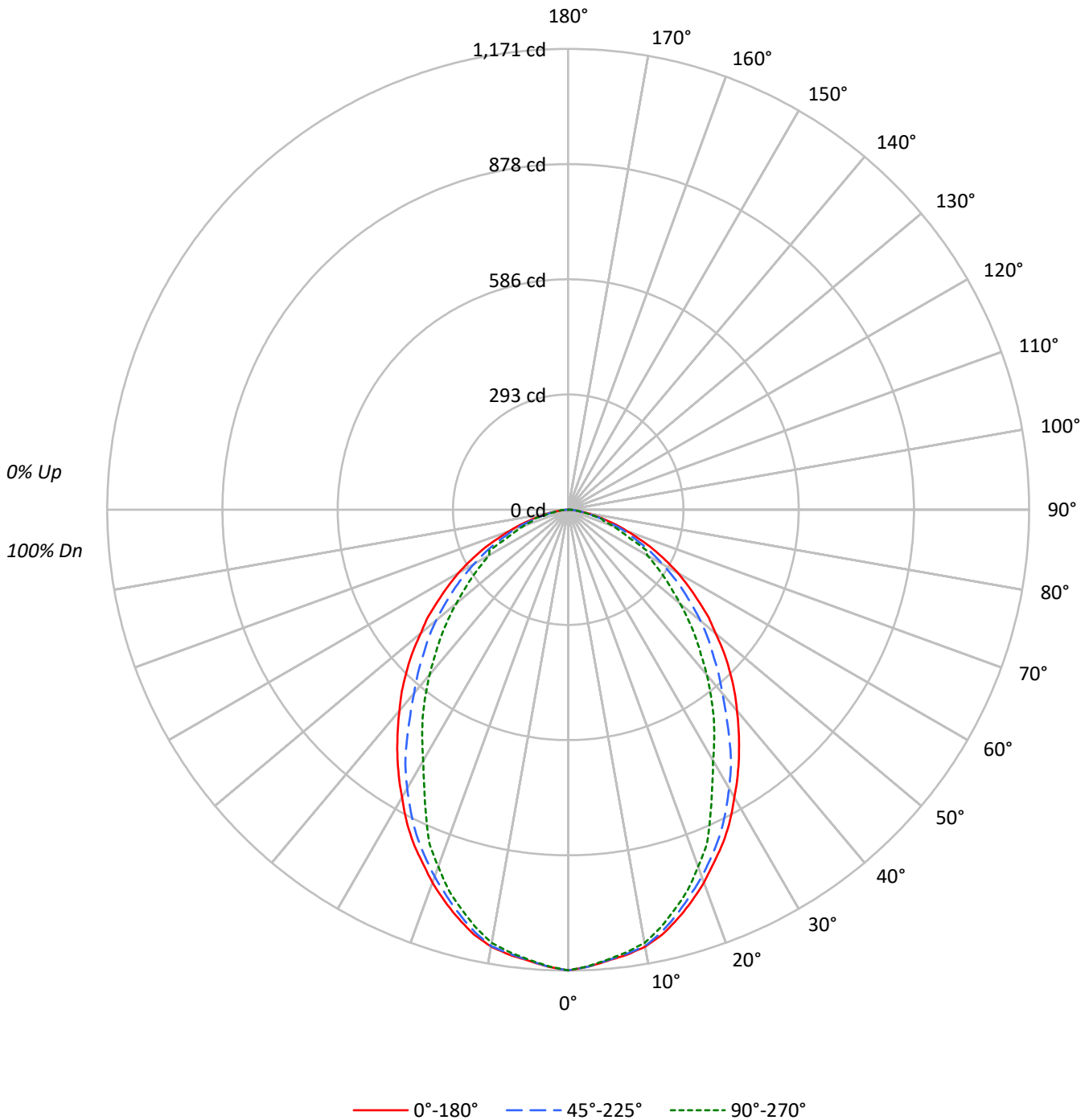
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6300	6300	6300
5°	6215	6207	6200
10°	6161	6153	6109
15°	5994	5934	5851
20°	5774	5681	5526
25°	5537	5416	5079
30°	5248	5080	4575
35°	4970	4694	4232
40°	4688	4279	3851
45°	4418	3956	3481
50°	4090	3671	3105
55°	3784	3327	2781
60°	3467	2972	2491
65°	3050	2602	2206
70°	2513	2279	1874
75°	1998	1745	1830
80°	1342	1258	1175
85°	834	1000	1167

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4418 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.0	4.7
10°-20°	299.0	13.0
20°-30°	414.0	18.0
30°-40°	441.5	19.2
40°-50°	402.7	17.5
50°-60°	315.5	13.7
60°-70°	205.6	8.9
70°-80°	91.1	4.0
80°-90°	19.6	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°	822.0	35.8
0°-40°	1263.5	55.0
0°-60°	1981.7	86.2
0°-90°	2298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1171	1171	1171	1171	1171	
5°	1150	1149	1149	1148	1148	109
15°	1076	1076	1065	1054	1050	302
25°	932	927	912	880	855	428
35°	756	751	714	660	644	473
45°	580	568	520	476	457	447
55°	403	391	355	313	296	362
65°	240	226	204	208	173	236
75°	96	89	84	80	88	103
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°	1170.6	1170.6	1170.6	1170.6	1170.6
2.5°	1162.5	1162.5	1162.5	1161.1	1161.1
5°	1150.3	1148.9	1148.9	1147.6	1147.6
7.5°	1140.8	1139.4	1138.1	1136.7	1134.0
10°	1127.3	1127.3	1125.9	1119.1	1117.8
12.5°	1105.6	1104.3	1098.8	1089.4	1086.7
15°	1075.8	1075.8	1065.0	1054.2	1050.1
17.5°	1043.4	1042.0	1028.5	1017.7	1012.2
20°	1008.2	1005.5	991.9	974.3	964.9
22.5°	968.9	968.9	952.7	929.7	920.2
25°	932.4	927.0	912.1	879.6	855.3
27.5°	890.4	882.3	866.1	820.1	791.7
30°	844.4	840.4	817.4	757.8	736.2
32.5°	801.1	794.4	770.0	707.8	690.2
35°	756.5	751.1	714.5	660.4	644.2
37.5°	711.8	705.0	659.0	615.7	595.4
40°	667.2	659.0	609.0	569.7	548.1
42.5°	625.2	614.4	565.7	523.7	499.4
45°	580.5	568.4	519.7	476.3	457.4
47.5°	535.9	525.1	480.4	435.7	414.1
50°	488.5	479.1	438.5	393.8	370.8
52.5°	449.3	434.4	395.2	350.5	331.5
55°	403.3	391.1	354.6	312.6	296.4
57.5°	361.3	349.1	315.3	276.1	262.5
60°	322.1	304.5	276.1	242.2	231.4
62.5°	278.8	265.2	240.9	212.5	226.0
65°	239.5	226.0	204.3	208.4	173.2
67.5°	196.2	189.5	170.5	151.6	146.2
70°	159.7	151.6	144.8	124.5	119.1
72.5°	127.2	119.1	109.6	98.8	94.7
75°	96.1	89.3	83.9	79.8	88.0
77.5°	66.3	63.6	59.5	55.5	54.1
80°	43.3	42.0	40.6	39.2	37.9
82.5°	25.7	25.7	25.7	25.7	25.7
85°	13.5	14.9	16.2	17.6	18.9
87.5°	8.1	8.1	9.5	10.8	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)