

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: P560650

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560650
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-LD4-2STD-40-UNV-81-94-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2465.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

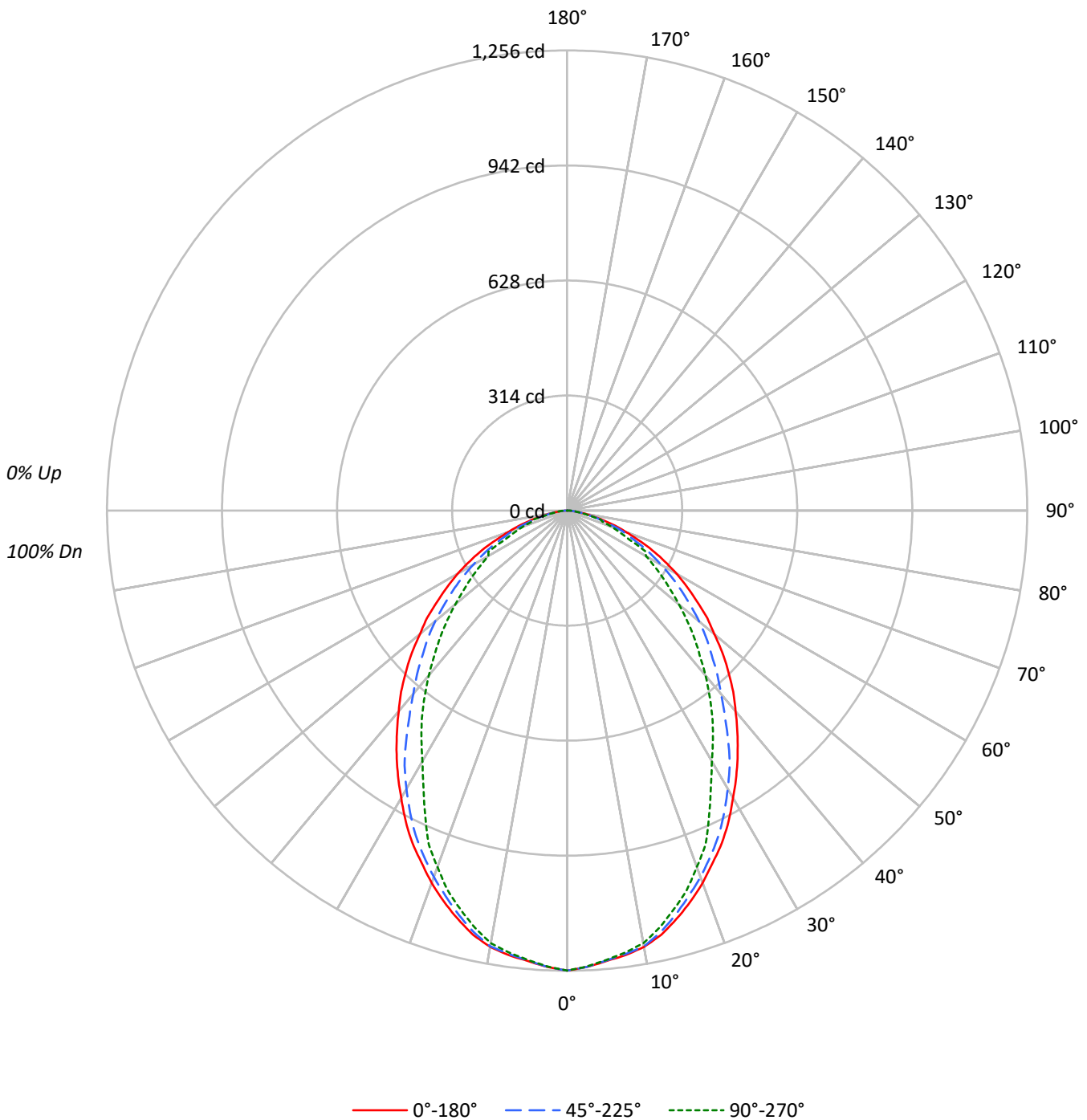
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6758	6758	6758
5°	6666	6658	6650
10°	6608	6600	6553
15°	6430	6365	6276
20°	6194	6094	5928
25°	5940	5810	5448
30°	5629	5449	4908
35°	5331	5035	4540
40°	5028	4589	4130
45°	4740	4243	3734
50°	4387	3938	3330
55°	4059	3568	2983
60°	3719	3187	2672
65°	3272	2791	2366
70°	2696	2444	2009
75°	2144	1871	1963
80°	1441	1348	1258
85°	895	1074	1254

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4740 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.9	4.7
10°-20°	320.8	13.0
20°-30°	444.1	18.0
30°-40°	473.5	19.2
40°-50°	432.0	17.5
50°-60°	338.4	13.7
60°-70°	220.6	8.9
70°-80°	97.7	4.0
80°-90°	21.0	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°	881.7	35.8
0°-40°	1355.3	55.0
0°-60°	2125.7	86.2
0°-90°	2465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1234	1232	1232	1231	1231	117
15°	1154	1154	1142	1131	1126	324
25°	1000	994	978	944	917	459
35°	811	806	766	708	691	507
45°	623	610	557	511	491	480
55°	433	420	380	335	318	388
65°	257	242	219	224	186	253
75°	103	96	90	86	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1255.6	1255.6	1255.6	1255.6	1255.6
2.5°	1246.9	1246.9	1246.9	1245.5	1245.5
5°	1233.9	1232.4	1232.4	1231.0	1231.0
7.5°	1223.7	1222.3	1220.8	1219.3	1216.4
10°	1209.2	1209.2	1207.7	1200.5	1199.0
12.5°	1186.0	1184.5	1178.7	1168.5	1165.6
15°	1154.0	1154.0	1142.4	1130.8	1126.4
17.5°	1119.2	1117.7	1103.2	1091.6	1085.8
20°	1081.4	1078.5	1064.0	1045.2	1035.0
22.5°	1039.3	1039.3	1021.9	997.3	987.1
25°	1000.2	994.3	978.4	943.5	917.4
27.5°	955.2	946.4	929.0	879.7	849.2
30°	905.8	901.4	876.8	812.9	789.7
32.5°	859.3	852.1	826.0	759.2	740.3
35°	811.4	805.6	766.4	708.4	691.0
37.5°	763.5	756.3	706.9	660.5	638.7
40°	715.6	706.9	653.2	611.1	587.9
42.5°	670.6	659.0	606.8	561.8	535.6
45°	622.7	609.7	557.4	511.0	490.6
47.5°	574.8	563.2	515.3	467.4	444.2
50°	524.0	513.9	470.3	422.4	397.7
52.5°	481.9	466.0	423.9	376.0	355.6
55°	432.6	419.5	380.3	335.3	317.9
57.5°	387.6	374.5	338.2	296.1	281.6
60°	345.5	326.6	296.1	259.8	248.2
62.5°	299.0	284.5	258.4	227.9	242.4
65°	256.9	242.4	219.2	223.5	185.8
67.5°	210.5	203.2	182.9	162.6	156.8
70°	171.3	162.6	155.3	133.5	127.7
72.5°	136.5	127.7	117.6	106.0	101.6
75°	103.1	95.8	90.0	85.6	94.4
77.5°	71.1	68.2	63.9	59.5	58.1
80°	46.5	45.0	43.5	42.1	40.6
82.5°	27.6	27.6	27.6	27.6	27.6
85°	14.5	16.0	17.4	18.9	20.3
87.5°	8.7	8.7	10.2	11.6	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)