

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: P560743

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560743
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-50-UNV-93-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2944.0 lumens
Efficiency: N/A
Efficacy: 88.4 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

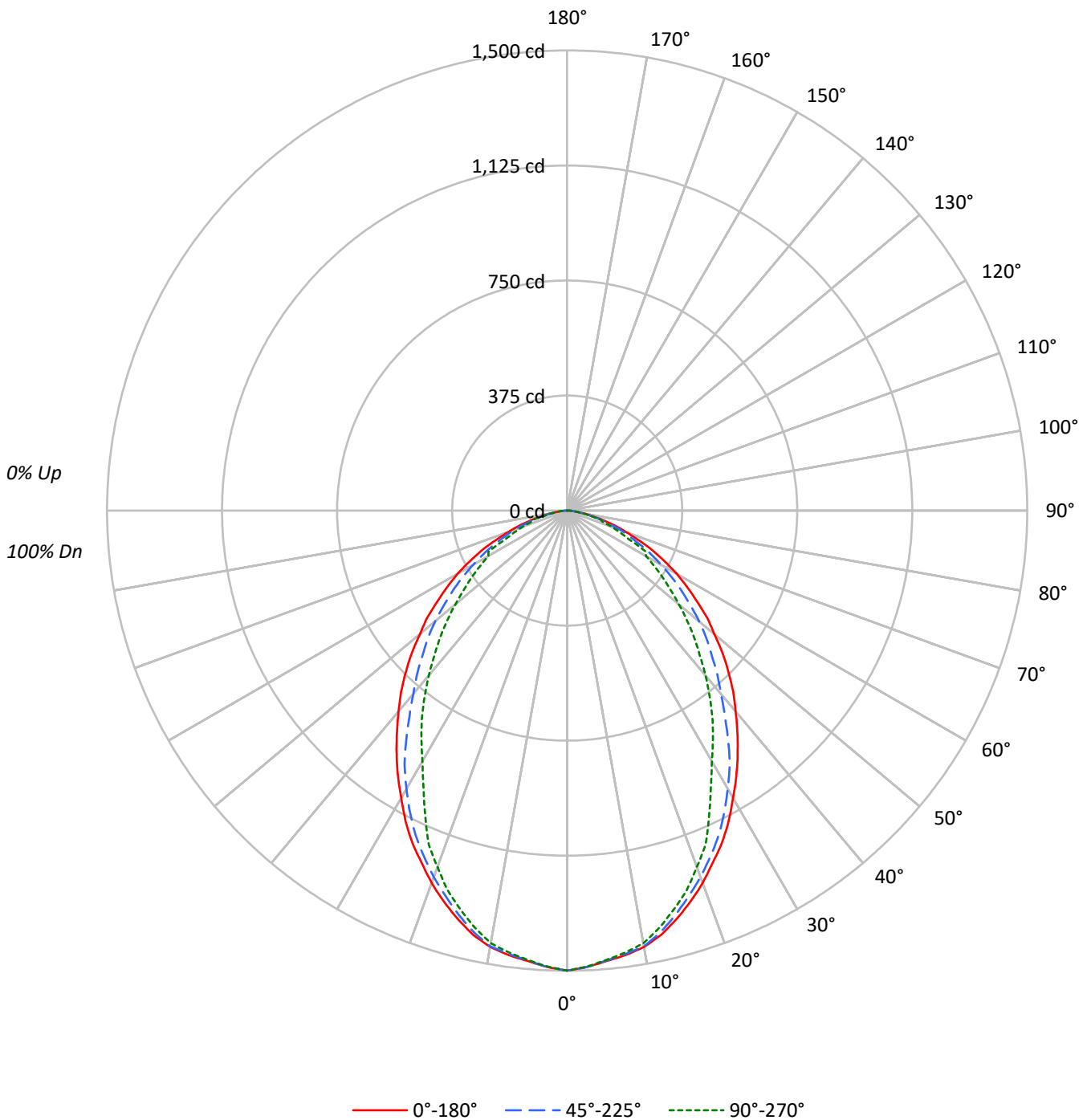
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8071	8071	8071
5°	7961	7952	7943
10°	7893	7883	7826
15°	7680	7602	7496
20°	7397	7278	7080
25°	7093	6939	6507
30°	6723	6507	5861
35°	6367	6014	5422
40°	6005	5481	4933
45°	5660	5067	4460
50°	5241	4703	3977
55°	4847	4262	3563
60°	4441	3807	3192
65°	3908	3334	2826
70°	3220	2919	2401
75°	2560	2235	2344
80°	1720	1612	1503
85°	1068	1284	1501

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5660 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.6	4.7
10°-20°	383.1	13.0
20°-30°	530.4	18.0
30°-40°	565.5	19.2
40°-50°	515.9	17.5
50°-60°	404.2	13.7
60°-70°	263.4	8.9
70°-80°	116.7	4.0
80°-90°	25.0	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°	1053.1	35.8
0°-40°	1618.6	55.0
0°-60°	2538.8	86.2
0°-90°	2944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1500	1500	1500	1500	1500	
5°	1474	1472	1472	1470	1470	140
15°	1378	1378	1364	1350	1345	387
25°	1194	1188	1168	1127	1096	548
35°	969	962	915	846	825	606
45°	744	728	666	610	586	573
55°	517	501	454	400	380	463
65°	307	290	262	267	222	302
75°	123	114	108	102	113	132
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1499.6	1499.6	1499.6	1499.6	1499.6
2.5°	1489.2	1489.2	1489.2	1487.5	1487.5
5°	1473.6	1471.9	1471.9	1470.2	1470.2
7.5°	1461.5	1459.8	1458.0	1456.3	1452.8
10°	1444.2	1444.2	1442.4	1433.8	1432.0
12.5°	1416.4	1414.7	1407.7	1395.6	1392.1
15°	1378.3	1378.3	1364.4	1350.5	1345.3
17.5°	1336.7	1334.9	1317.6	1303.7	1296.8
20°	1291.6	1288.1	1270.8	1248.3	1236.1
22.5°	1241.3	1241.3	1220.5	1191.0	1178.9
25°	1194.5	1187.6	1168.5	1126.9	1095.7
27.5°	1140.8	1130.4	1109.6	1050.6	1014.2
30°	1081.8	1076.6	1047.1	970.9	943.1
32.5°	1026.3	1017.7	986.5	906.7	884.2
35°	969.1	962.2	915.4	846.0	825.2
37.5°	911.9	903.2	844.3	788.8	762.8
40°	854.7	844.3	780.2	729.9	702.1
42.5°	801.0	787.1	724.7	670.9	639.7
45°	743.7	728.1	665.7	610.3	586.0
47.5°	686.5	672.7	615.5	558.2	530.5
50°	625.9	613.7	561.7	504.5	475.0
52.5°	575.6	556.5	506.2	449.0	424.8
55°	516.6	501.0	454.2	400.5	379.7
57.5°	462.9	447.3	403.9	353.7	336.3
60°	412.6	390.1	353.7	310.3	296.5
62.5°	357.1	339.8	308.6	272.2	289.5
65°	306.9	289.5	261.8	267.0	221.9
67.5°	251.4	242.7	218.4	194.2	187.2
70°	204.6	194.2	185.5	159.5	152.6
72.5°	163.0	152.6	140.4	126.6	121.4
75°	123.1	114.4	107.5	102.3	112.7
77.5°	85.0	81.5	76.3	71.1	69.3
80°	55.5	53.7	52.0	50.3	48.5
82.5°	32.9	32.9	32.9	32.9	32.9
85°	17.3	19.1	20.8	22.5	24.3
87.5°	10.4	10.4	12.1	13.9	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)