

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: P560745

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560745
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-93-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2651.0 lumens
Efficiency: N/A
Efficacy: 79.6 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

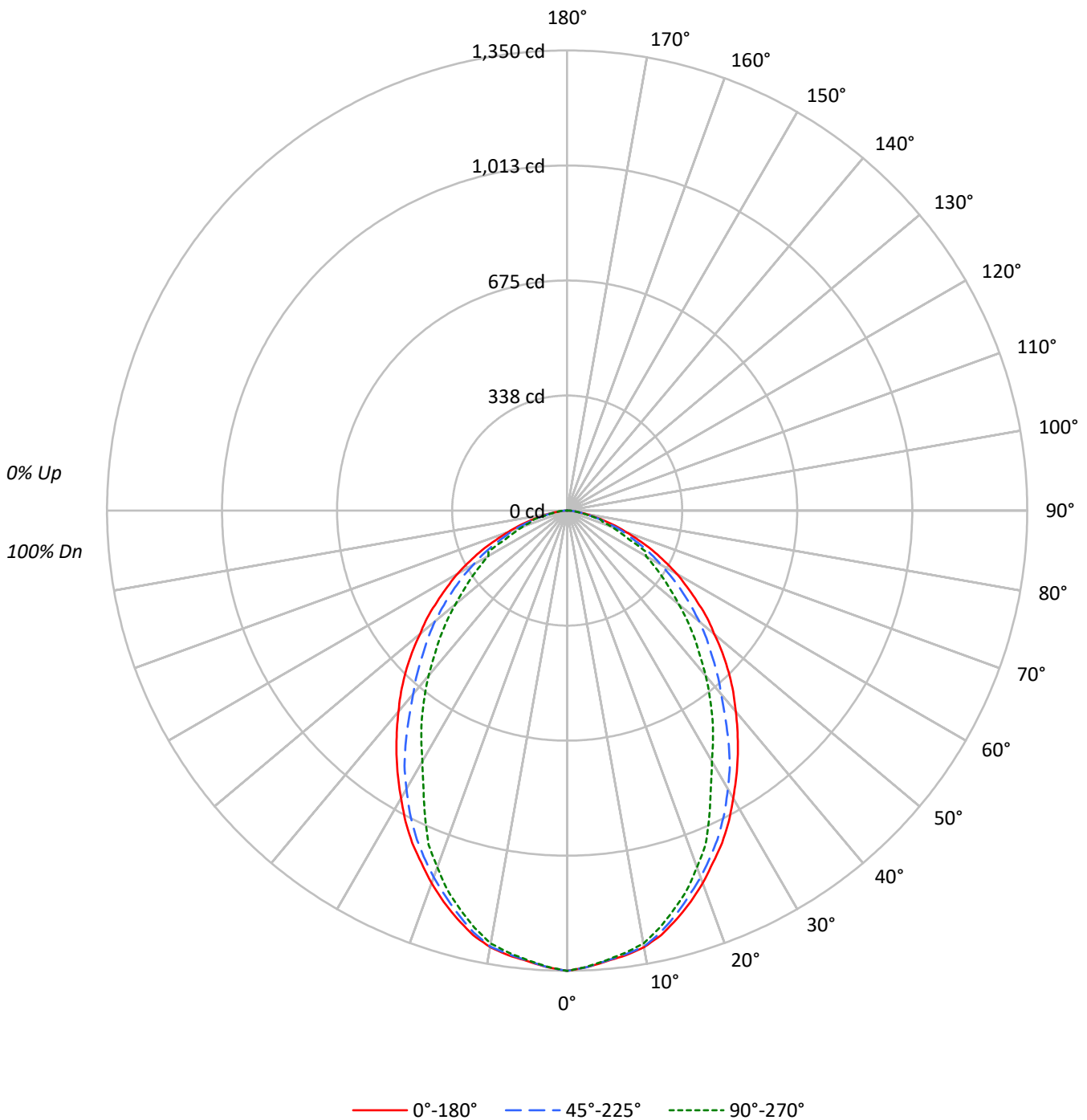
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7268	7268	7268
5°	7169	7160	7152
10°	7107	7098	7047
15°	6915	6846	6750
20°	6661	6554	6375
25°	6387	6248	5859
30°	6054	5860	5278
35°	5734	5416	4882
40°	5407	4936	4442
45°	5097	4563	4016
50°	4719	4235	3582
55°	4365	3838	3208
60°	4000	3428	2874
65°	3519	3002	2544
70°	2899	2628	2162
75°	2304	2013	2111
80°	1550	1450	1354
85°	963	1155	1352

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5097 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.7	4.7
10°-20°	345.0	13.0
20°-30°	477.6	18.0
30°-40°	509.3	19.2
40°-50°	464.6	17.5
50°-60°	364.0	13.7
60°-70°	237.2	8.9
70°-80°	105.1	4.0
80°-90°	22.6	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°	948.3	35.8
0°-40°	1457.5	55.0
0°-60°	2286.1	86.2
0°-90°	2651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1327	1325	1325	1324	1324	126
15°	1241	1241	1229	1216	1211	349
25°	1076	1069	1052	1015	987	494
35°	873	866	824	762	743	546
45°	670	656	600	550	528	516
55°	465	451	409	361	342	417
65°	276	261	236	240	200	272
75°	111	103	97	92	102	119
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1350.4	1350.4	1350.4	1350.4	1350.4
2.5°	1341.0	1341.0	1341.0	1339.5	1339.5
5°	1327.0	1325.4	1325.4	1323.8	1323.8
7.5°	1316.0	1314.5	1312.9	1311.4	1308.2
10°	1300.4	1300.4	1298.9	1291.1	1289.5
12.5°	1275.4	1273.9	1267.6	1256.7	1253.6
15°	1241.1	1241.1	1228.6	1216.1	1211.4
17.5°	1203.6	1202.1	1186.5	1174.0	1167.7
20°	1163.0	1159.9	1144.3	1124.0	1113.1
22.5°	1117.8	1117.8	1099.0	1072.5	1061.6
25°	1075.6	1069.4	1052.2	1014.7	986.6
27.5°	1027.2	1017.9	999.1	946.0	913.3
30°	974.1	969.5	942.9	874.2	849.3
32.5°	924.2	916.4	888.3	816.5	796.2
35°	872.7	866.4	824.3	761.8	743.1
37.5°	821.2	813.4	760.3	710.3	686.9
40°	769.6	760.3	702.5	657.2	632.3
42.5°	721.2	708.8	652.6	604.2	576.1
45°	669.7	655.7	599.5	549.5	527.7
47.5°	618.2	605.7	554.2	502.7	477.7
50°	563.6	552.6	505.8	454.3	427.8
52.5°	518.3	501.1	455.9	404.3	382.5
55°	465.2	451.2	409.0	360.6	341.9
57.5°	416.8	402.8	363.7	318.5	302.9
60°	371.6	351.3	318.5	279.4	267.0
62.5°	321.6	306.0	277.9	245.1	260.7
65°	276.3	260.7	235.7	240.4	199.8
67.5°	226.4	218.6	196.7	174.8	168.6
70°	184.2	174.8	167.0	143.6	137.4
72.5°	146.7	137.4	126.5	114.0	109.3
75°	110.8	103.0	96.8	92.1	101.5
77.5°	76.5	73.4	68.7	64.0	62.4
80°	50.0	48.4	46.8	45.3	43.7
82.5°	29.7	29.7	29.7	29.7	29.7
85°	15.6	17.2	18.7	20.3	21.9
87.5°	9.4	9.4	10.9	12.5	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)