

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: P560590

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-81-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560590
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-35-UNV-81-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2318.0 lumens
Efficiency: N/A
Efficacy: 69.6 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

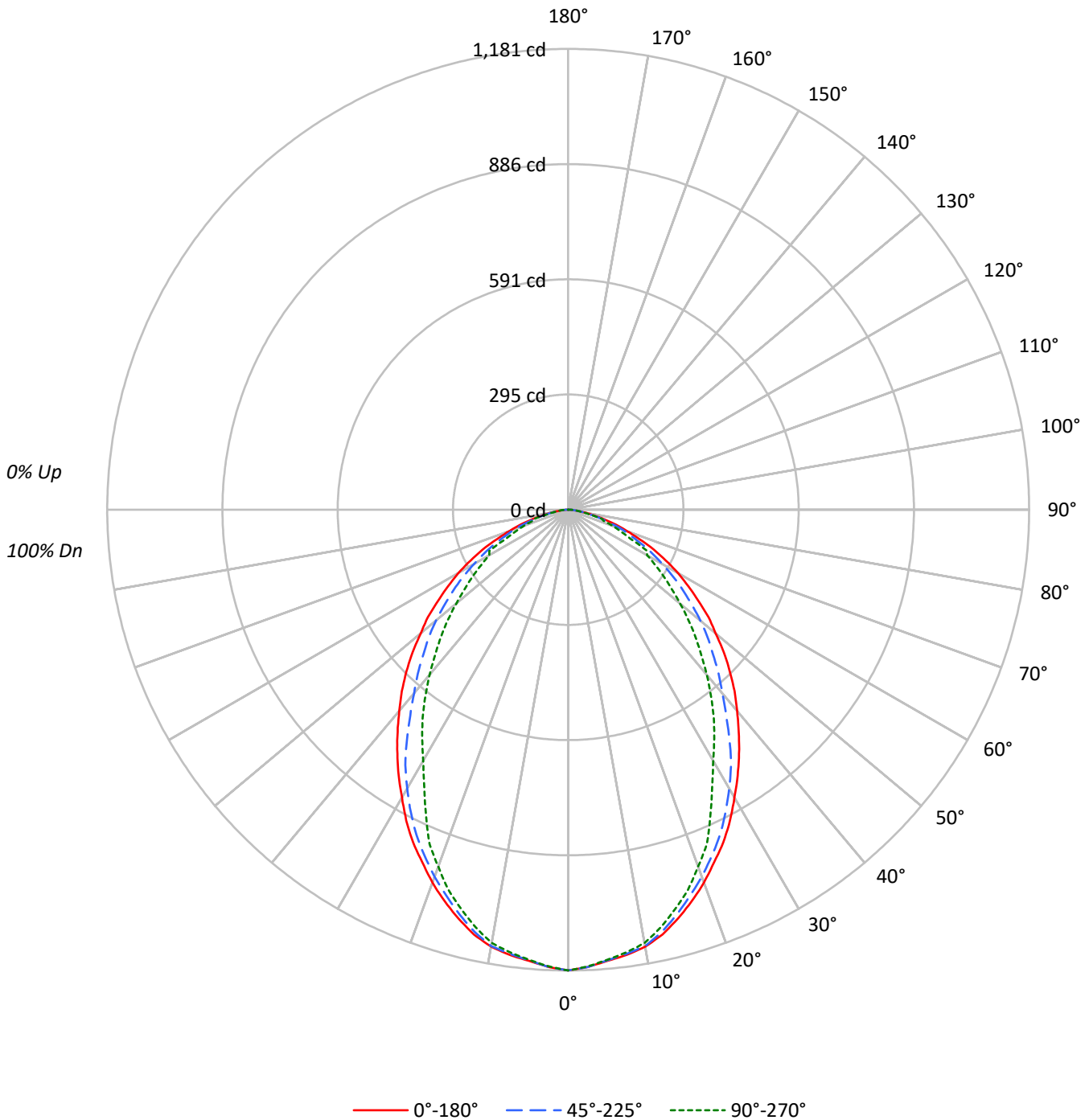
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6355	6355	6355
5°	6269	6261	6254
10°	6214	6207	6162
15°	6047	5986	5902
20°	5825	5731	5574
25°	5585	5463	5123
30°	5294	5124	4615
35°	5014	4735	4269
40°	4728	4316	3884
45°	4457	3990	3512
50°	4126	3703	3131
55°	3817	3355	2805
60°	3497	2998	2512
65°	3077	2625	2225
70°	2535	2299	1890
75°	2015	1759	1844
80°	1354	1271	1184
85°	846	1013	1179

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4457 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	4.7
10°-20°	301.6	13.0
20°-30°	417.6	18.0
30°-40°	445.3	19.2
40°-50°	406.2	17.5
50°-60°	318.3	13.7
60°-70°	207.4	8.9
70°-80°	91.9	4.0
80°-90°	19.7	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°	829.2	35.8
0°-40°	1274.5	55.0
0°-60°	1999.0	86.2
0°-90°	2318.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2318.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1160	1159	1159	1158	1158	110
15°	1085	1085	1074	1063	1059	305
25°	940	935	920	887	863	432
35°	763	758	721	666	650	477
45°	586	573	524	480	461	451
55°	407	394	358	315	299	365
65°	242	228	206	210	175	238
75°	97	90	85	80	89	104
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°	1180.8	1180.8	1180.8	1180.8	1180.8
2.5°	1172.6	1172.6	1172.6	1171.2	1171.2
5°	1160.3	1158.9	1158.9	1157.6	1157.6
7.5°	1150.7	1149.4	1148.0	1146.6	1143.9
10°	1137.1	1137.1	1135.7	1128.9	1127.5
12.5°	1115.2	1113.9	1108.4	1098.9	1096.1
15°	1085.2	1085.2	1074.3	1063.4	1059.3
17.5°	1052.4	1051.1	1037.4	1026.5	1021.0
20°	1017.0	1014.2	1000.6	982.8	973.3
22.5°	977.4	977.4	961.0	937.8	928.2
25°	940.5	935.1	920.0	887.3	862.7
27.5°	898.2	890.0	873.6	827.2	798.5
30°	851.8	847.7	824.5	764.4	742.6
32.5°	808.1	801.3	776.7	713.9	696.2
35°	763.1	757.6	720.7	666.1	649.8
37.5°	718.0	711.2	664.8	621.1	600.6
40°	673.0	664.8	614.3	574.7	552.8
42.5°	630.6	619.7	570.6	528.3	503.7
45°	585.6	573.3	524.2	480.5	461.4
47.5°	540.6	529.6	484.6	439.5	417.7
50°	492.8	483.2	442.3	397.2	374.0
52.5°	453.2	438.2	398.6	353.5	334.4
55°	406.8	394.5	357.6	315.3	298.9
57.5°	364.5	352.2	318.1	278.5	264.8
60°	324.9	307.1	278.5	244.3	233.4
62.5°	281.2	267.5	243.0	214.3	228.0
65°	241.6	228.0	206.1	210.2	174.7
67.5°	197.9	191.1	172.0	152.9	147.4
70°	161.1	152.9	146.1	125.6	120.1
72.5°	128.3	120.1	110.6	99.6	95.6
75°	96.9	90.1	84.6	80.5	88.7
77.5°	66.9	64.2	60.1	56.0	54.6
80°	43.7	42.3	41.0	39.6	38.2
82.5°	25.9	25.9	25.9	25.9	25.9
85°	13.7	15.0	16.4	17.7	19.1
87.5°	8.2	8.2	9.6	10.9	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)