

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: P560686

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560686
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-93-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2479.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

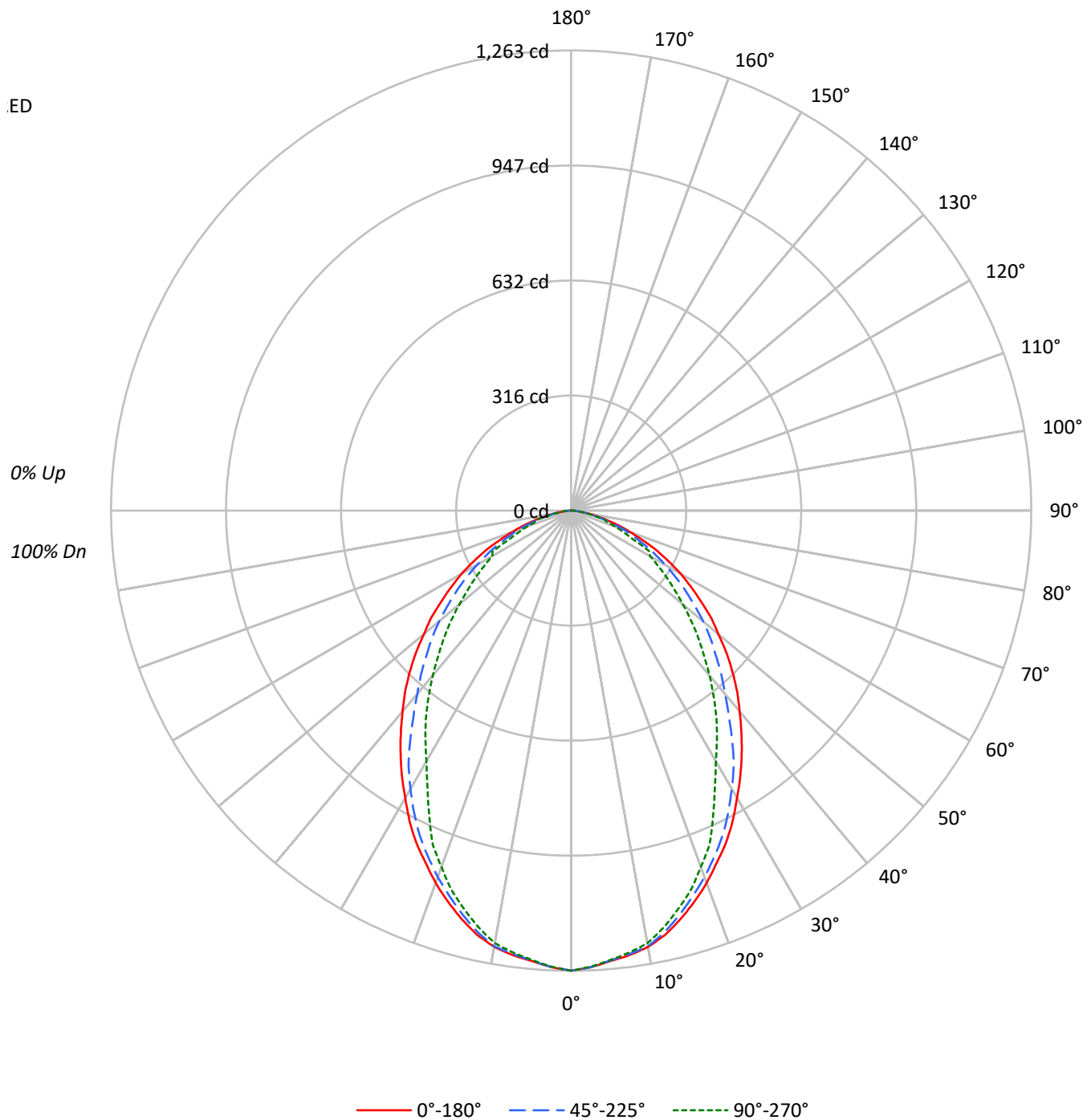
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6796	6796	6796
5°	6704	6696	6688
10°	6646	6638	6590
15°	6467	6401	6312
20°	6229	6129	5962
25°	5973	5843	5479
30°	5661	5479	4936
35°	5362	5064	4566
40°	5056	4615	4154
45°	4767	4267	3755
50°	4412	3960	3349
55°	4082	3589	3000
60°	3739	3205	2687
65°	3291	2807	2380
70°	2711	2458	2022
75°	2154	1882	1973
80°	1447	1358	1268
85°	902	1081	1260

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4767 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.5	4.7
10°-20°	322.6	13.0
20°-30°	446.6	18.0
30°-40°	476.2	19.2
40°-50°	434.5	17.5
50°-60°	340.4	13.7
60°-70°	221.8	8.9
70°-80°	98.3	4.0
80°-90°	21.1	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°	886.8	35.8
0°-40°	1363.0	55.0
0°-60°	2137.8	86.2
0°-90°	2479.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2479.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1241	1239	1239	1238	1238	118
15°	1161	1161	1149	1137	1133	326
25°	1006	1000	984	949	923	462
35°	816	810	771	712	695	510
45°	626	613	561	514	493	482
55°	435	422	382	337	320	390
65°	258	244	220	225	187	255
75°	104	96	90	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1262.8	1262.8	1262.8	1262.8	1262.8
2.5°	1254.0	1254.0	1254.0	1252.6	1252.6
5°	1240.9	1239.4	1239.4	1238.0	1238.0
7.5°	1230.7	1229.2	1227.7	1226.3	1223.4
10°	1216.1	1216.1	1214.6	1207.3	1205.8
12.5°	1192.7	1191.2	1185.4	1175.2	1172.3
15°	1160.6	1160.6	1148.9	1137.2	1132.8
17.5°	1125.5	1124.1	1109.5	1097.8	1092.0
20°	1087.6	1084.7	1070.1	1051.1	1040.9
22.5°	1045.3	1045.3	1027.7	1002.9	992.7
25°	1005.8	1000.0	983.9	948.9	922.6
27.5°	960.6	951.8	934.3	884.7	854.0
30°	910.9	906.6	881.7	817.5	794.2
32.5°	864.2	856.9	830.7	763.5	744.5
35°	816.1	810.2	770.8	712.4	694.9
37.5°	767.9	760.6	710.9	664.2	642.3
40°	719.7	710.9	656.9	614.6	591.2
42.5°	674.5	662.8	610.2	565.0	538.7
45°	626.3	613.1	560.6	513.9	493.4
47.5°	578.1	566.4	518.2	470.1	446.7
50°	527.0	516.8	473.0	424.8	400.0
52.5°	484.7	468.6	426.3	378.1	357.7
55°	435.0	421.9	382.5	337.2	319.7
57.5°	389.8	376.6	340.1	297.8	283.2
60°	347.4	328.5	297.8	261.3	249.6
62.5°	300.7	286.1	259.9	229.2	243.8
65°	258.4	243.8	220.4	224.8	186.9
67.5°	211.7	204.4	183.9	163.5	157.7
70°	172.3	163.5	156.2	134.3	128.5
72.5°	137.2	128.5	118.2	106.6	102.2
75°	103.6	96.4	90.5	86.1	94.9
77.5°	71.5	68.6	64.2	59.9	58.4
80°	46.7	45.3	43.8	42.3	40.9
82.5°	27.7	27.7	27.7	27.7	27.7
85°	14.6	16.1	17.5	19.0	20.4
87.5°	8.8	8.8	10.2	11.7	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)