

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: P560649

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560649
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-81-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2472.0 lumens
Efficiency: N/A
Efficacy: 74.2 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

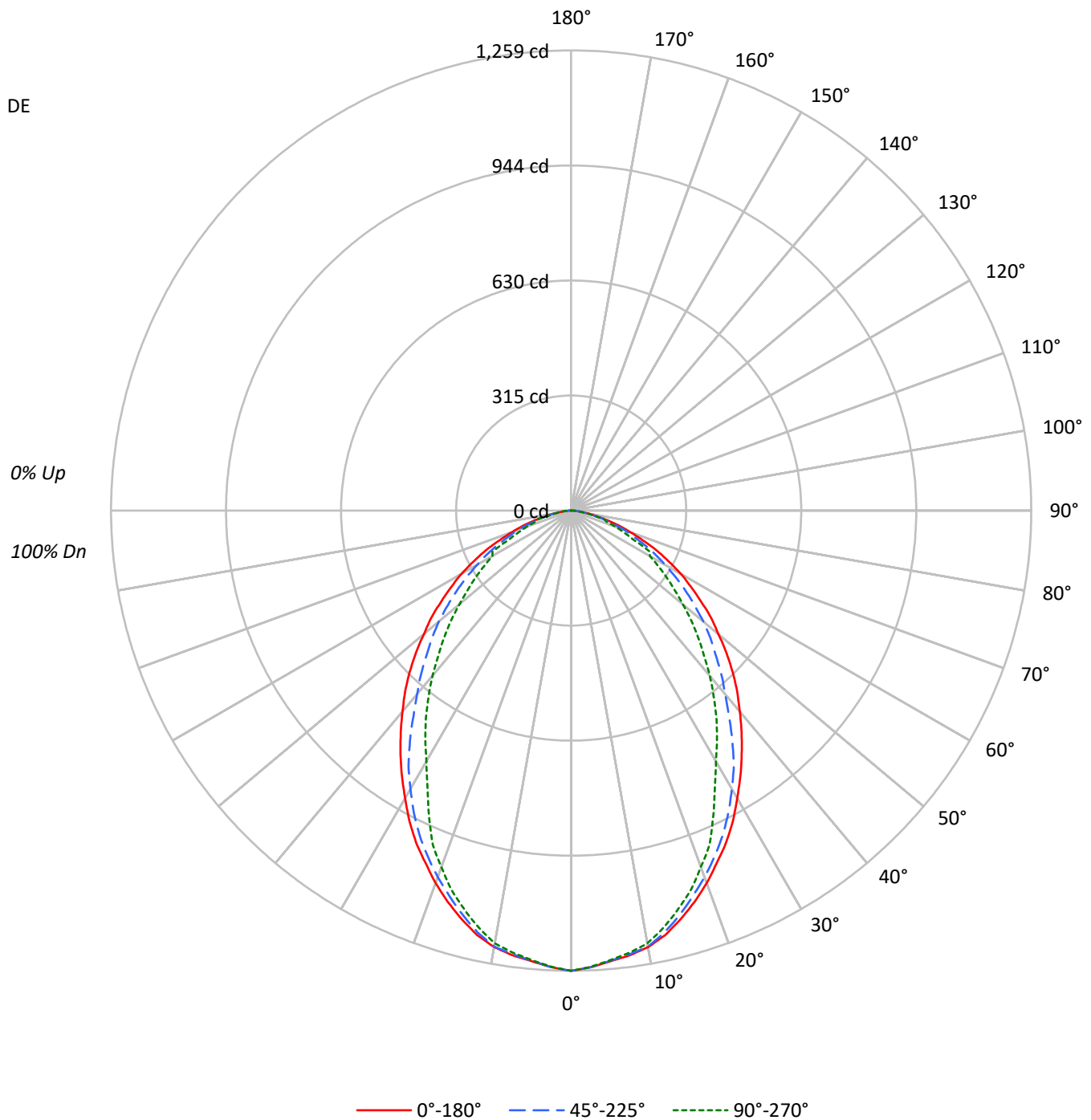
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6777	6777	6777
5°	6685	6677	6669
10°	6627	6619	6571
15°	6448	6384	6294
20°	6211	6111	5944
25°	5956	5827	5463
30°	5645	5464	4921
35°	5347	5050	4552
40°	5042	4603	4142
45°	4753	4255	3745
50°	4400	3949	3340
55°	4070	3579	2991
60°	3730	3197	2679
65°	3282	2799	2372
70°	2703	2452	2016
75°	2150	1878	1967
80°	1444	1354	1265
85°	902	1081	1260

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4753 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.2	4.7
10°-20°	321.7	13.0
20°-30°	445.4	18.0
30°-40°	474.9	19.2
40°-50°	433.2	17.5
50°-60°	339.4	13.7
60°-70°	221.2	8.9
70°-80°	98.0	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°	884.3	35.8
0°-40°	1359.1	55.0
0°-60°	2131.8	86.2
0°-90°	2472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2472.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1259	1259	1259	1259	1259	
5°	1237	1236	1236	1234	1234	117
15°	1157	1157	1146	1134	1130	325
25°	1003	997	981	946	920	460
35°	814	808	769	710	693	509
45°	624	611	559	512	492	481
55°	434	421	381	336	319	389
65°	258	243	220	224	186	254
75°	103	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°	1259.2	1259.2	1259.2	1259.2	1259.2
2.5°	1250.5	1250.5	1250.5	1249.0	1249.0
5°	1237.4	1235.9	1235.9	1234.5	1234.5
7.5°	1227.2	1225.7	1224.3	1222.8	1219.9
10°	1212.6	1212.6	1211.2	1203.9	1202.4
12.5°	1189.3	1187.9	1182.1	1171.9	1168.9
15°	1157.3	1157.3	1145.7	1134.0	1129.6
17.5°	1122.4	1120.9	1106.4	1094.7	1088.9
20°	1084.5	1081.6	1067.0	1048.1	1037.9
22.5°	1042.3	1042.3	1024.8	1000.1	989.9
25°	1003.0	997.2	981.2	946.2	920.0
27.5°	957.9	949.1	931.7	882.2	851.6
30°	908.4	904.0	879.3	815.2	791.9
32.5°	861.8	854.5	828.3	761.3	742.4
35°	813.8	807.9	768.6	710.4	692.9
37.5°	765.7	758.4	708.9	662.4	640.5
40°	717.7	708.9	655.1	612.9	589.6
42.5°	672.5	660.9	608.5	563.4	537.2
45°	624.5	611.4	559.0	512.4	492.0
47.5°	576.5	564.8	516.8	468.7	445.5
50°	525.5	515.3	471.7	423.6	398.9
52.5°	483.3	467.3	425.1	377.0	356.7
55°	433.8	420.7	381.4	336.3	318.8
57.5°	388.7	375.6	339.2	297.0	282.4
60°	346.5	327.5	297.0	260.6	248.9
62.5°	299.9	285.3	259.1	228.5	243.1
65°	257.7	243.1	219.8	224.2	186.3
67.5°	211.1	203.8	183.4	163.0	157.2
70°	171.8	163.0	155.8	133.9	128.1
72.5°	136.8	128.1	117.9	106.3	101.9
75°	103.4	96.1	90.3	85.9	94.6
77.5°	71.3	68.4	64.1	59.7	58.2
80°	46.6	45.1	43.7	42.2	40.8
82.5°	27.7	27.7	27.7	27.7	27.7
85°	14.6	16.0	17.5	18.9	20.4
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)