

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: P560640

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560640
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-81-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2459.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

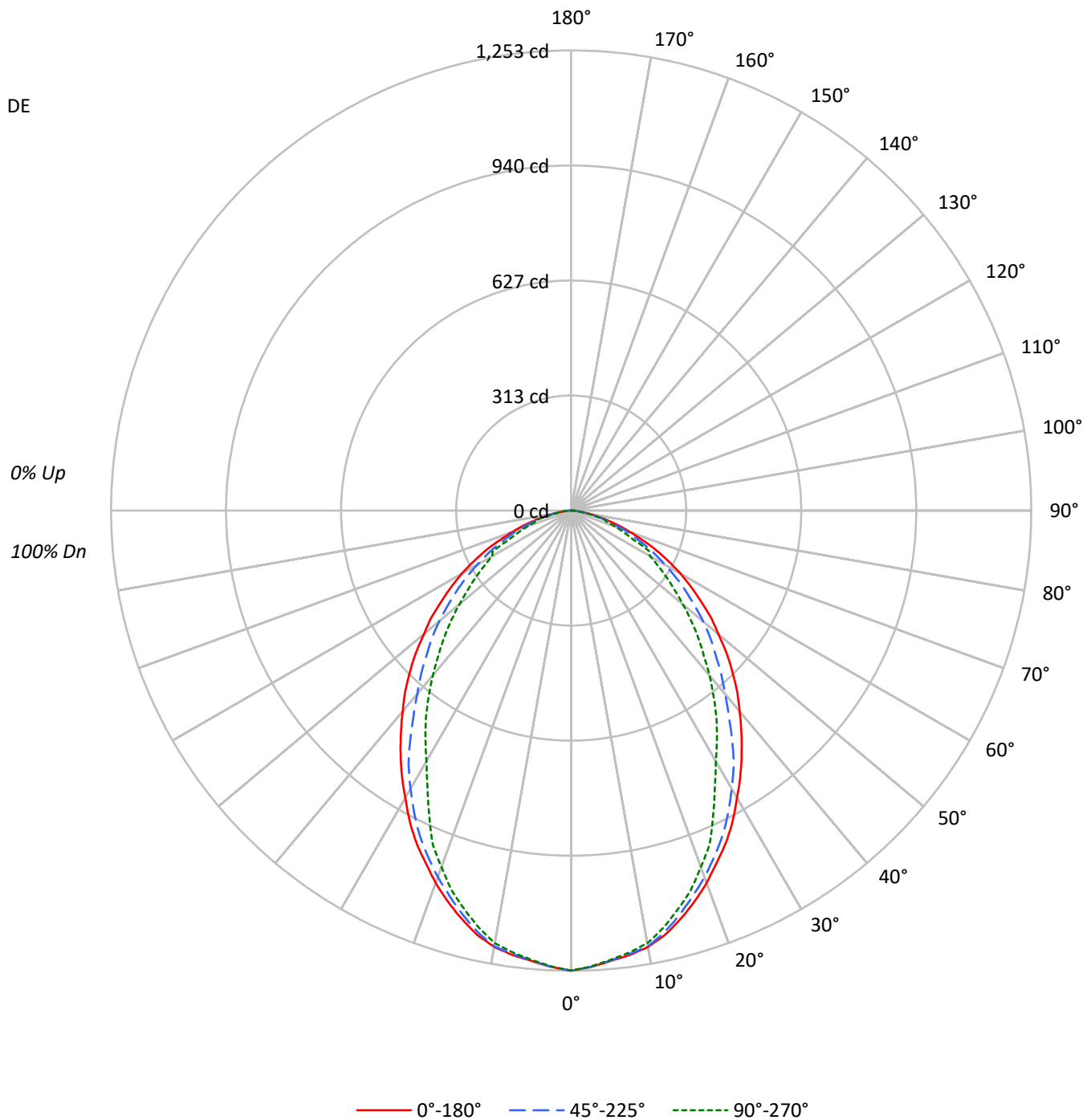
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6741	6741	6741
5°	6650	6642	6634
10°	6592	6584	6537
15°	6414	6350	6261
20°	6179	6079	5913
25°	5925	5796	5435
30°	5615	5435	4896
35°	5319	5024	4529
40°	5016	4578	4121
45°	4728	4233	3725
50°	4377	3929	3322
55°	4049	3560	2975
60°	3709	3180	2665
65°	3264	2785	2361
70°	2689	2437	2005
75°	2138	1867	1957
80°	1435	1345	1255
85°	895	1074	1254

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4728 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	4.7
10°-20°	320.0	13.0
20°-30°	443.0	18.0
30°-40°	472.4	19.2
40°-50°	430.9	17.5
50°-60°	337.6	13.7
60°-70°	220.0	8.9
70°-80°	97.5	4.0
80°-90°	20.9	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°	879.6	35.8
0°-40°	1352.0	55.0
0°-60°	2120.5	86.2
0°-90°	2459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1253	1253	1253	1253	1253	
5°	1231	1229	1229	1228	1228	117
15°	1151	1151	1140	1128	1124	324
25°	998	992	976	941	915	458
35°	810	804	765	707	689	506
45°	621	608	556	510	489	479
55°	432	418	379	334	317	387
65°	256	242	219	223	185	253
75°	103	96	90	85	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1252.6	1252.6	1252.6	1252.6	1252.6
2.5°	1243.9	1243.9	1243.9	1242.4	1242.4
5°	1230.9	1229.4	1229.4	1228.0	1228.0
7.5°	1220.7	1219.3	1217.8	1216.4	1213.5
10°	1206.2	1206.2	1204.8	1197.6	1196.1
12.5°	1183.1	1181.6	1175.8	1165.7	1162.8
15°	1151.2	1151.2	1139.6	1128.0	1123.7
17.5°	1116.5	1115.0	1100.5	1088.9	1083.2
20°	1078.8	1075.9	1061.4	1042.6	1032.5
22.5°	1036.8	1036.8	1019.4	994.8	984.7
25°	997.7	991.9	976.0	941.2	915.2
27.5°	952.8	944.1	926.8	877.5	847.1
30°	903.6	899.3	874.6	810.9	787.8
32.5°	857.3	850.0	824.0	757.3	738.5
35°	809.5	803.7	764.6	706.7	689.3
37.5°	761.7	754.4	705.2	658.9	637.2
40°	713.9	705.2	651.6	609.6	586.5
42.5°	669.0	657.4	605.3	560.4	534.3
45°	621.2	608.2	556.1	509.7	489.4
47.5°	573.4	561.9	514.1	466.3	443.1
50°	522.8	512.6	469.2	421.4	396.8
52.5°	480.8	464.8	422.8	375.1	354.8
55°	431.5	418.5	379.4	334.5	317.1
57.5°	386.6	373.6	337.4	295.4	280.9
60°	344.6	325.8	295.4	259.2	247.6
62.5°	298.3	283.8	257.8	227.3	241.8
65°	256.3	241.8	218.7	223.0	185.4
67.5°	210.0	202.7	182.5	162.2	156.4
70°	170.9	162.2	154.9	133.2	127.4
72.5°	136.1	127.4	117.3	105.7	101.4
75°	102.8	95.6	89.8	85.4	94.1
77.5°	71.0	68.1	63.7	59.4	57.9
80°	46.3	44.9	43.4	42.0	40.5
82.5°	27.5	27.5	27.5	27.5	27.5
85°	14.5	15.9	17.4	18.8	20.3
87.5°	8.7	8.7	10.1	11.6	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)