

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: P560196

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560196
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-LD4-2HI-35-UNV-81-86-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2883.0 lumens
Efficiency: N/A
Efficacy: 66.7 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

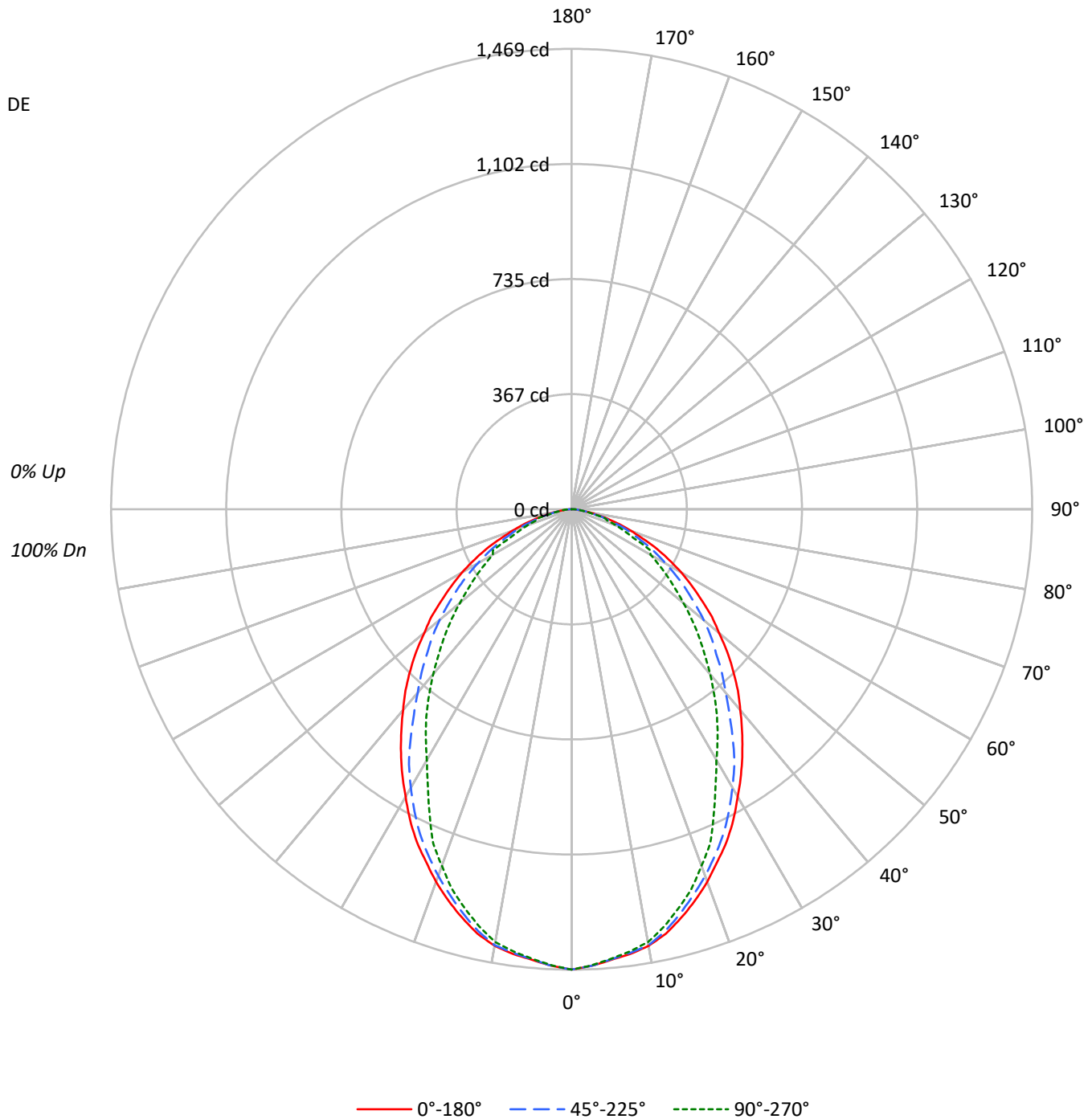
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7904	7904	7904
5°	7796	7787	7778
10°	7729	7719	7664
15°	7520	7444	7341
20°	7244	7128	6933
25°	6947	6795	6372
30°	6584	6372	5740
35°	6235	5889	5309
40°	5880	5368	4831
45°	5543	4962	4367
50°	5132	4606	3895
55°	4747	4174	3489
60°	4350	3728	3125
65°	3827	3265	2767
70°	3152	2859	2351
75°	2506	2190	2296
80°	1683	1578	1472
85°	1050	1260	1470

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5543 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.7	4.7
10°-20°	375.2	13.0
20°-30°	519.4	18.0
30°-40°	553.8	19.2
40°-50°	505.3	17.5
50°-60°	395.8	13.7
60°-70°	258.0	8.9
70°-80°	114.3	4.0
80°-90°	24.6	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°	1031.3	35.8
0°-40°	1585.1	55.0
0°-60°	2486.2	86.2
0°-90°	2883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2883.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1469	1469	1469	1469	1469	
5°	1443	1441	1441	1440	1440	137
15°	1350	1350	1336	1323	1318	379
25°	1170	1163	1144	1104	1073	537
35°	949	942	896	828	808	593
45°	728	713	652	598	574	561
55°	506	491	445	392	372	454
65°	300	284	256	262	217	296
75°	120	112	105	100	110	129
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1468.6	1468.6	1468.6	1468.6	1468.6
2.5°	1458.4	1458.4	1458.4	1456.7	1456.7
5°	1443.1	1441.4	1441.4	1439.7	1439.7
7.5°	1431.2	1429.5	1427.8	1426.1	1422.7
10°	1414.2	1414.2	1412.5	1404.0	1402.3
12.5°	1387.1	1385.4	1378.6	1366.7	1363.3
15°	1349.7	1349.7	1336.1	1322.6	1317.5
17.5°	1309.0	1307.3	1290.3	1276.7	1269.9
20°	1264.8	1261.4	1244.5	1222.4	1210.5
22.5°	1215.6	1215.6	1195.2	1166.4	1154.5
25°	1169.8	1163.0	1144.3	1103.5	1073.0
27.5°	1117.1	1106.9	1086.6	1028.8	993.2
30°	1059.4	1054.3	1025.4	950.7	923.6
32.5°	1005.1	996.6	966.0	887.9	865.9
35°	949.0	942.3	896.4	828.5	808.1
37.5°	893.0	884.5	826.8	772.5	747.0
40°	837.0	826.8	764.0	714.8	687.6
42.5°	784.4	770.8	709.7	657.0	626.5
45°	728.3	713.1	651.9	597.6	573.8
47.5°	672.3	658.7	602.7	546.7	519.5
50°	612.9	601.0	550.1	494.0	465.2
52.5°	563.7	545.0	495.7	439.7	416.0
55°	505.9	490.7	444.8	392.2	371.8
57.5°	453.3	438.0	395.6	346.3	329.4
60°	404.1	382.0	346.3	303.9	290.3
62.5°	349.7	332.8	302.2	266.5	283.5
65°	300.5	283.5	256.4	261.5	217.3
67.5°	246.2	237.7	213.9	190.1	183.4
70°	200.3	190.1	181.7	156.2	149.4
72.5°	159.6	149.4	137.5	123.9	118.8
75°	120.5	112.1	105.3	100.2	110.4
77.5°	83.2	79.8	74.7	69.6	67.9
80°	54.3	52.6	50.9	49.2	47.5
82.5°	32.3	32.3	32.3	32.3	32.3
85°	17.0	18.7	20.4	22.1	23.8
87.5°	10.2	10.2	11.9	13.6	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)