

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: P560222

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560222
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-82-97-EDD-90
Description: 1X2 FSR TROFFER WITH .187 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: 2843.0 lumens
Efficiency: N/A
Efficacy: 65.8 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

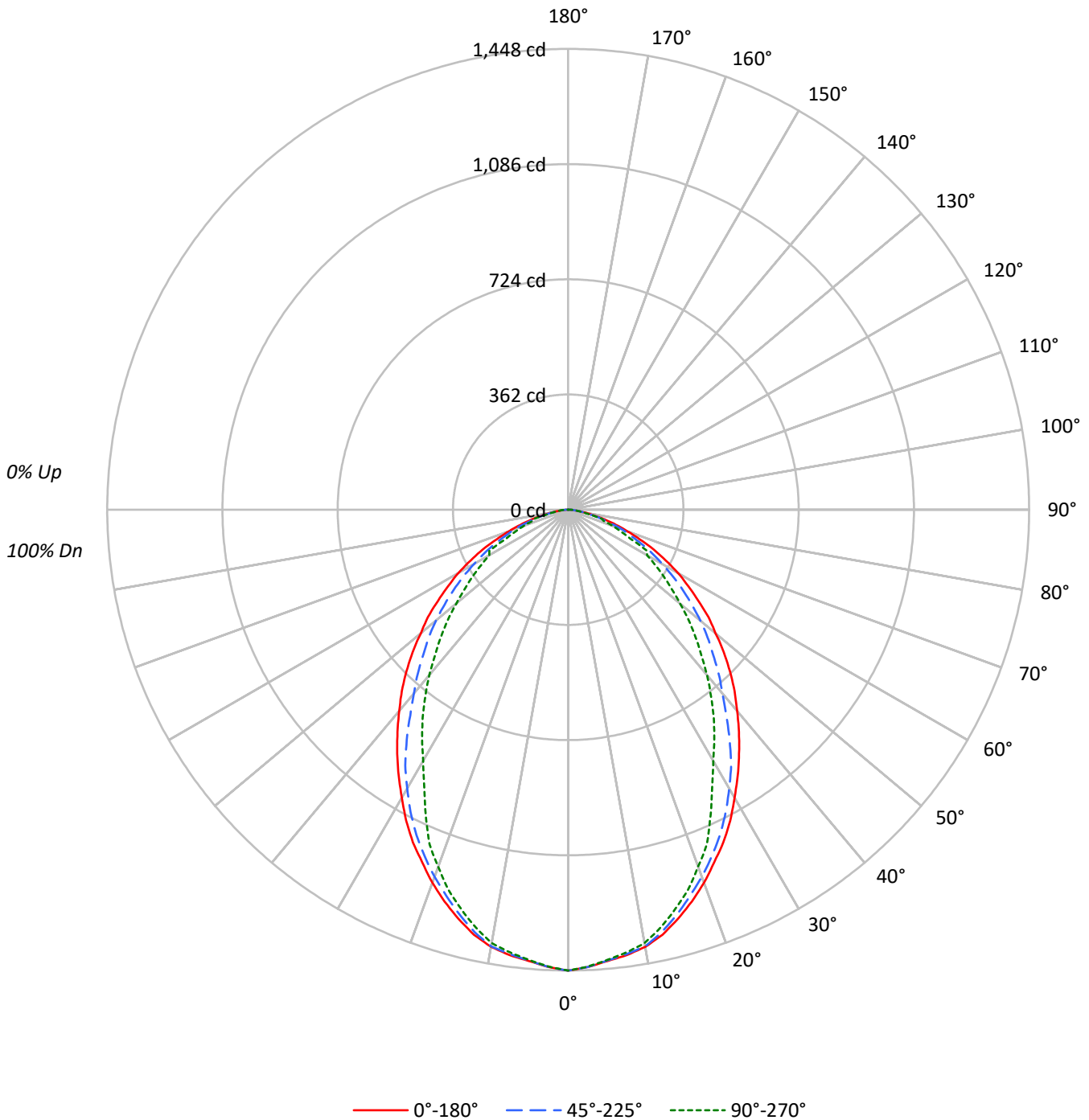
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7794	7794	7794
5°	7688	7679	7670
10°	7621	7612	7558
15°	7416	7341	7239
20°	7144	7029	6837
25°	6850	6701	6283
30°	6492	6284	5660
35°	6149	5808	5236
40°	5799	5293	4764
45°	5466	4893	4307
50°	5061	4541	3841
55°	4681	4115	3441
60°	4289	3676	3082
65°	3773	3219	2729
70°	3109	2818	2318
75°	2472	2158	2262
80°	1661	1556	1454
85°	1031	1241	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5466 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	4.7
10°-20°	370.0	13.0
20°-30°	512.2	18.0
30°-40°	546.1	19.2
40°-50°	498.2	17.5
50°-60°	390.3	13.7
60°-70°	254.4	8.9
70°-80°	112.7	4.0
80°-90°	24.2	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°	1017.0	35.8
0°-40°	1563.1	55.0
0°-60°	2451.7	86.2
0°-90°	2843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1423	1421	1421	1420	1420	135
15°	1331	1331	1318	1304	1299	374
25°	1154	1147	1128	1088	1058	530
35°	936	929	884	817	797	585
45°	718	703	643	589	566	553
55°	499	484	439	387	367	447
65°	296	280	253	258	214	292
75°	119	110	104	99	109	127
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1448.2	1448.2	1448.2	1448.2	1448.2
2.5°	1438.1	1438.1	1438.1	1436.5	1436.5
5°	1423.1	1421.4	1421.4	1419.7	1419.7
7.5°	1411.4	1409.7	1408.0	1406.3	1403.0
10°	1394.6	1394.6	1392.9	1384.6	1382.9
12.5°	1367.8	1366.2	1359.5	1347.7	1344.4
15°	1331.0	1331.0	1317.6	1304.2	1299.2
17.5°	1290.8	1289.1	1272.4	1259.0	1252.3
20°	1247.3	1243.9	1227.2	1205.4	1193.7
22.5°	1198.7	1198.7	1178.6	1150.2	1138.5
25°	1153.5	1146.8	1128.4	1088.2	1058.1
27.5°	1101.6	1091.6	1071.5	1014.6	979.4
30°	1044.7	1039.7	1011.2	937.6	910.8
32.5°	991.1	982.8	952.6	875.6	853.8
35°	935.9	929.2	884.0	817.0	796.9
37.5°	880.6	872.3	815.3	761.8	736.6
40°	825.4	815.3	753.4	704.8	678.1
42.5°	773.5	760.1	699.8	647.9	617.8
45°	718.2	703.2	642.9	589.3	565.9
47.5°	663.0	649.6	594.3	539.1	512.3
50°	604.4	592.7	542.4	487.2	458.7
52.5°	555.8	537.4	488.9	433.6	410.2
55°	498.9	483.8	438.6	386.7	366.7
57.5°	447.0	431.9	390.1	341.5	324.8
60°	398.5	376.7	341.5	299.7	286.3
62.5°	344.9	328.1	298.0	262.8	279.6
65°	296.3	279.6	252.8	257.8	214.3
67.5°	242.8	234.4	210.9	187.5	180.8
70°	197.6	187.5	179.1	154.0	147.3
72.5°	157.4	147.3	135.6	122.2	117.2
75°	118.9	110.5	103.8	98.8	108.8
77.5°	82.0	78.7	73.7	68.6	67.0
80°	53.6	51.9	50.2	48.6	46.9
82.5°	31.8	31.8	31.8	31.8	31.8
85°	16.7	18.4	20.1	21.8	23.4
87.5°	10.0	10.0	11.7	13.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)