

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: P560276

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560276
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-40-UNV-82-86-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2862.0 lumens
Efficiency: N/A
Efficacy: 66.3 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

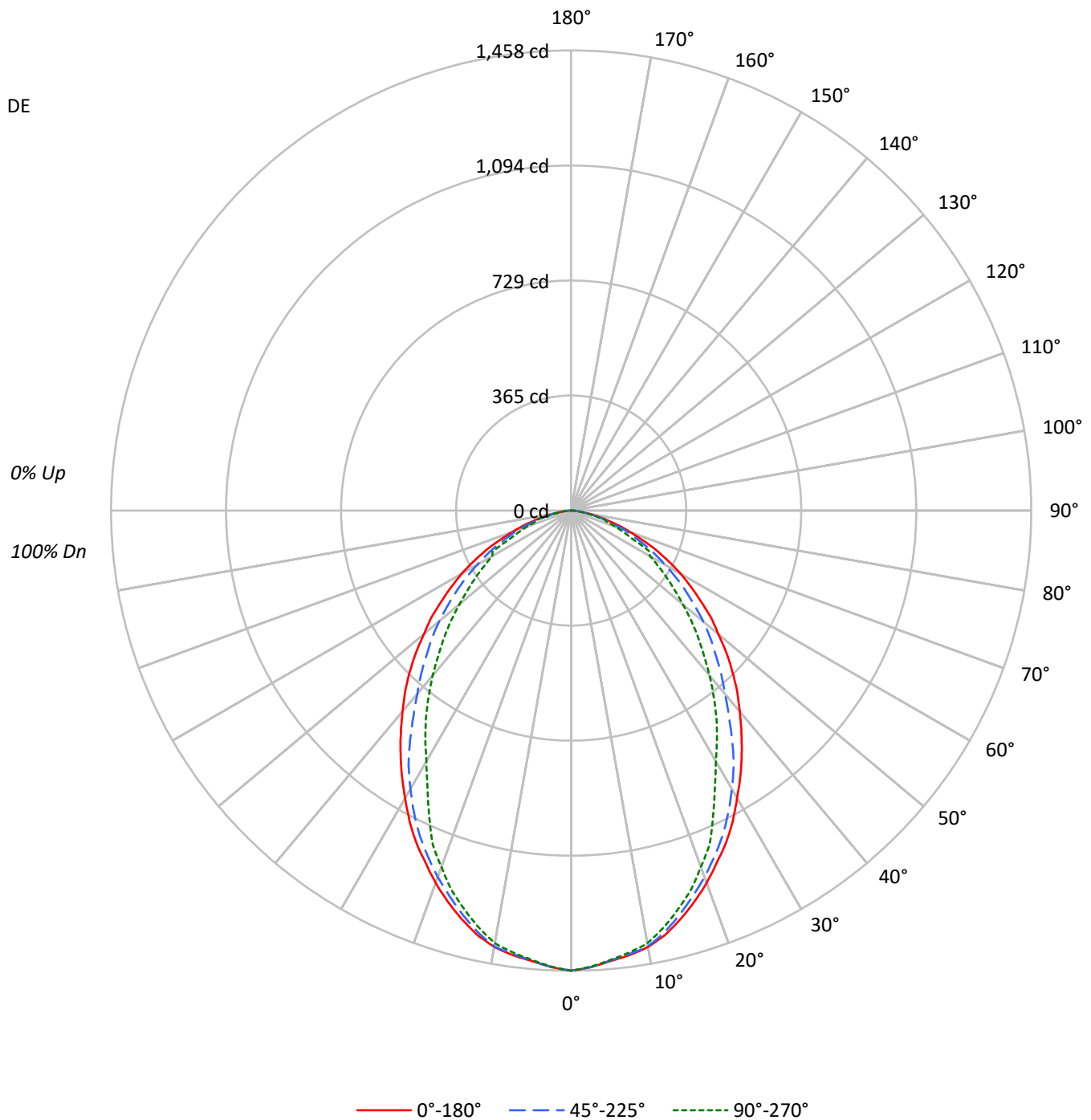
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	7846	7846	7846
5°	7740	7730	7721
10°	7672	7663	7608
15°	7466	7390	7287
20°	7191	7076	6883
25°	6896	6746	6326
30°	6536	6326	5698
35°	6190	5847	5271
40°	5838	5328	4796
45°	5503	4926	4336
50°	5094	4572	3867
55°	4712	4144	3463
60°	4317	3701	3102
65°	3799	3241	2747
70°	3130	2837	2334
75°	2489	2173	2279
80°	1671	1568	1463
85°	1044	1247	1457

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5503 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.7	4.7
10°-20°	372.4	13.0
20°-30°	515.6	18.0
30°-40°	549.8	19.2
40°-50°	501.6	17.5
50°-60°	392.9	13.7
60°-70°	256.1	8.9
70°-80°	113.5	4.0
80°-90°	24.4	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°	1023.8	35.8
0°-40°	1573.6	55.0
0°-60°	2468.1	86.2
0°-90°	2862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1433	1431	1431	1429	1429	136
15°	1340	1340	1326	1313	1308	377
25°	1161	1154	1136	1096	1065	533
35°	942	935	890	822	802	589
45°	723	708	647	593	570	557
55°	502	487	442	389	369	450
65°	298	282	254	260	216	294
75°	120	111	104	99	110	128
85°	17	18	20	22	24	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1457.9	1457.9	1457.9	1457.9	1457.9
2.5°	1447.8	1447.8	1447.8	1446.1	1446.1
5°	1432.6	1430.9	1430.9	1429.2	1429.2
7.5°	1420.8	1419.1	1417.4	1415.7	1412.4
10°	1403.9	1403.9	1402.2	1393.8	1392.1
12.5°	1377.0	1375.3	1368.5	1356.7	1353.4
15°	1339.9	1339.9	1326.4	1312.9	1307.9
17.5°	1299.4	1297.8	1280.9	1267.4	1260.7
20°	1255.6	1252.2	1235.4	1213.5	1201.7
22.5°	1206.7	1206.7	1186.5	1157.9	1146.1
25°	1161.2	1154.5	1136.0	1095.5	1065.2
27.5°	1109.0	1098.9	1078.7	1021.3	986.0
30°	1051.7	1046.6	1018.0	943.8	916.9
32.5°	997.8	989.3	959.0	881.5	859.6
35°	942.1	935.4	889.9	822.5	802.2
37.5°	886.5	878.1	820.8	766.9	741.6
40°	830.9	820.8	758.4	709.6	682.6
42.5°	778.7	765.2	704.5	652.2	621.9
45°	723.0	707.9	647.2	593.3	569.7
47.5°	667.4	653.9	598.3	542.7	515.7
50°	608.4	596.6	546.1	490.4	461.8
52.5°	559.6	541.0	492.1	436.5	412.9
55°	502.2	487.1	441.6	389.3	369.1
57.5°	450.0	434.8	392.7	343.8	327.0
60°	401.1	379.2	343.8	301.7	288.2
62.5°	347.2	330.3	300.0	264.6	281.5
65°	298.3	281.5	254.5	259.6	215.7
67.5°	244.4	236.0	212.4	188.8	182.0
70°	198.9	188.8	180.3	155.1	148.3
72.5°	158.4	148.3	136.5	123.0	118.0
75°	119.7	111.2	104.5	99.4	109.6
77.5°	82.6	79.2	74.2	69.1	67.4
80°	53.9	52.2	50.6	48.9	47.2
82.5°	32.0	32.0	32.0	32.0	32.0
85°	16.9	18.5	20.2	21.9	23.6
87.5°	10.1	10.1	11.8	13.5	15.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)