

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: P561938

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561938
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-24-2-LD4-1LO-35-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

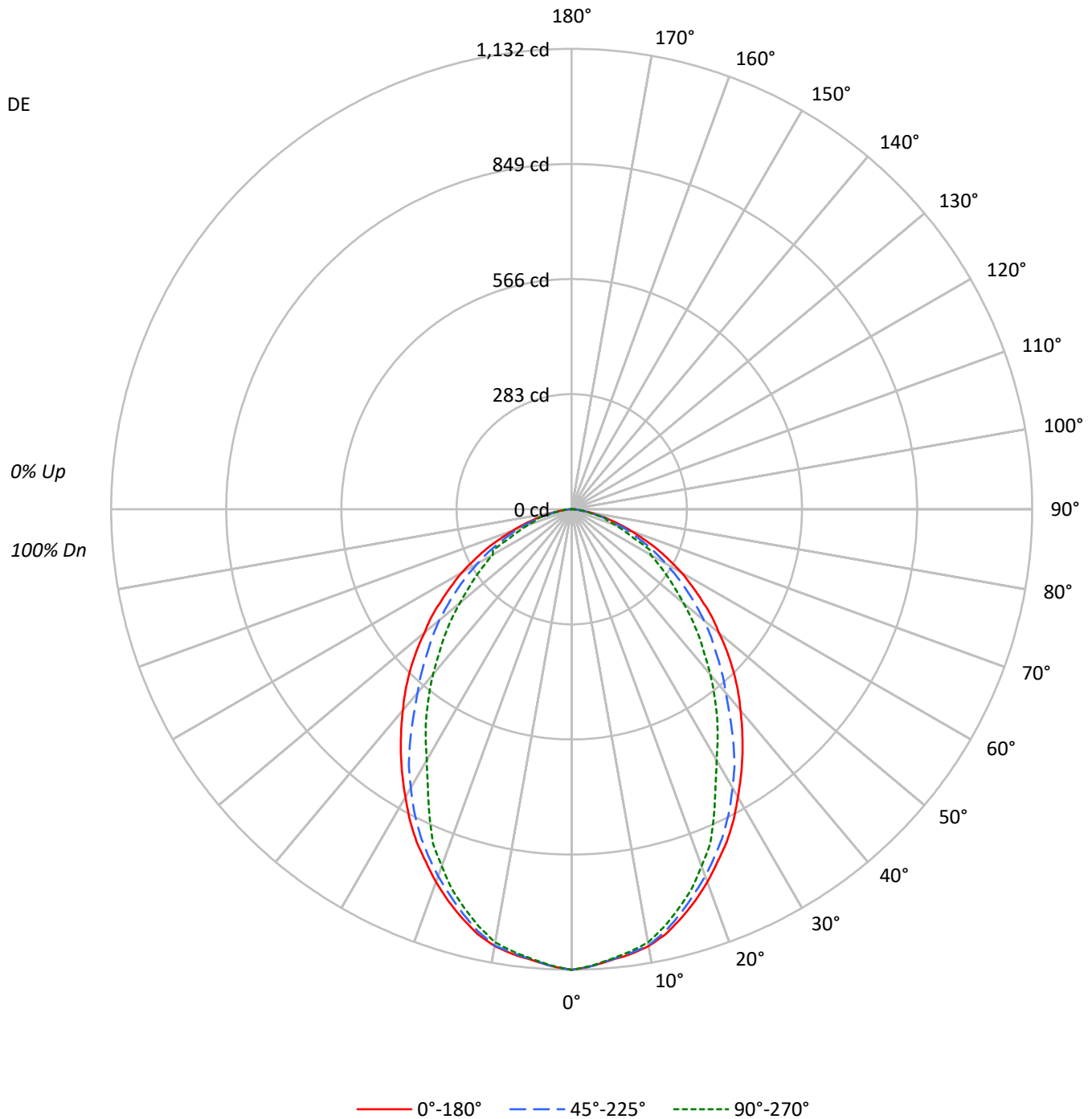
Lumens per Lamp: N/A
Luminaire Lumens: 2223.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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



TEST NUMBER: P561938
CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-82-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561938

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-82-85-EDD-90

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°	1524	1524	1524
5°	1503	1501	1499
10°	1490	1488	1477
15°	1450	1435	1415
20°	1396	1374	1336
25°	1339	1310	1228
30°	1269	1228	1106
35°	1202	1135	1023
40°	1134	1035	931
45°	1069	957	842
50°	989	888	751
55°	915	805	673
60°	839	719	603
65°	738	629	534
70°	608	551	453
75°	483	422	442
80°	325	305	284
85°	202	242	283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1069 cd/sqm



TEST NUMBER: P561938

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-82-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.4	4.7
10°-20°	289.3	13.0
20°-30°	400.5	18.0
30°-40°	427.0	19.2
40°-50°	389.6	17.5
50°-60°	305.2	13.7
60°-70°	198.9	8.9
70°-80°	88.1	4.0
80°-90°	18.9	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°	795.2	35.8
0°-40°	1222.2	55.0
0°-60°	1917.0	86.2
0°-90°	2223.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2223.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1113	1111	1111	1110	1110	106
15°	1041	1041	1030	1020	1016	293
25°	902	897	882	851	827	414
35°	732	726	691	639	623	458
45°	562	550	503	461	442	433
55°	390	378	343	302	287	350
65°	232	219	198	202	168	228
75°	93	86	81	77	85	100
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



TEST NUMBER: P561938

CATALOG NUMBER: FSR-24-2-LD4-1LO-35-UNV-82-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1132.4	1132.4	1132.4	1132.4	1132.4
2.5°	1124.5	1124.5	1124.5	1123.2	1123.2
5°	1112.7	1111.4	1111.4	1110.1	1110.1
7.5°	1103.6	1102.3	1100.9	1099.6	1097.0
10°	1090.5	1090.5	1089.2	1082.6	1081.3
12.5°	1069.5	1068.2	1063.0	1053.8	1051.2
15°	1040.7	1040.7	1030.3	1019.8	1015.9
17.5°	1009.3	1008.0	994.9	984.4	979.2
20°	975.3	972.7	959.6	942.5	933.4
22.5°	937.3	937.3	921.6	899.3	890.2
25°	902.0	896.7	882.3	850.9	827.3
27.5°	861.4	853.5	837.8	793.3	765.8
30°	816.9	812.9	790.7	733.1	712.1
32.5°	775.0	768.4	744.9	684.7	667.6
35°	731.8	726.5	691.2	638.8	623.1
37.5°	688.6	682.0	637.5	595.6	576.0
40°	645.4	637.5	589.1	551.1	530.2
42.5°	604.8	594.3	547.2	506.6	483.1
45°	561.6	549.8	502.7	460.8	442.5
47.5°	518.4	507.9	464.7	421.5	400.6
50°	472.6	463.4	424.1	380.9	358.7
52.5°	434.6	420.2	382.3	339.1	320.7
55°	390.1	378.3	343.0	302.4	286.7
57.5°	349.5	337.7	305.0	267.1	254.0
60°	311.6	294.5	267.1	234.3	223.9
62.5°	269.7	256.6	233.0	205.5	218.6
65°	231.7	218.6	197.7	201.6	167.6
67.5°	189.8	183.3	164.9	146.6	141.4
70°	154.5	146.6	140.1	120.4	115.2
72.5°	123.1	115.2	106.0	95.6	91.6
75°	92.9	86.4	81.2	77.2	85.1
77.5°	64.1	61.5	57.6	53.7	52.4
80°	41.9	40.6	39.3	38.0	36.7
82.5°	24.9	24.9	24.9	24.9	24.9
85°	13.1	14.4	15.7	17.0	18.3
87.5°	7.9	7.9	9.2	10.5	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)