

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: P562265

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562265
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-24-4-LD4-1LO-50-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

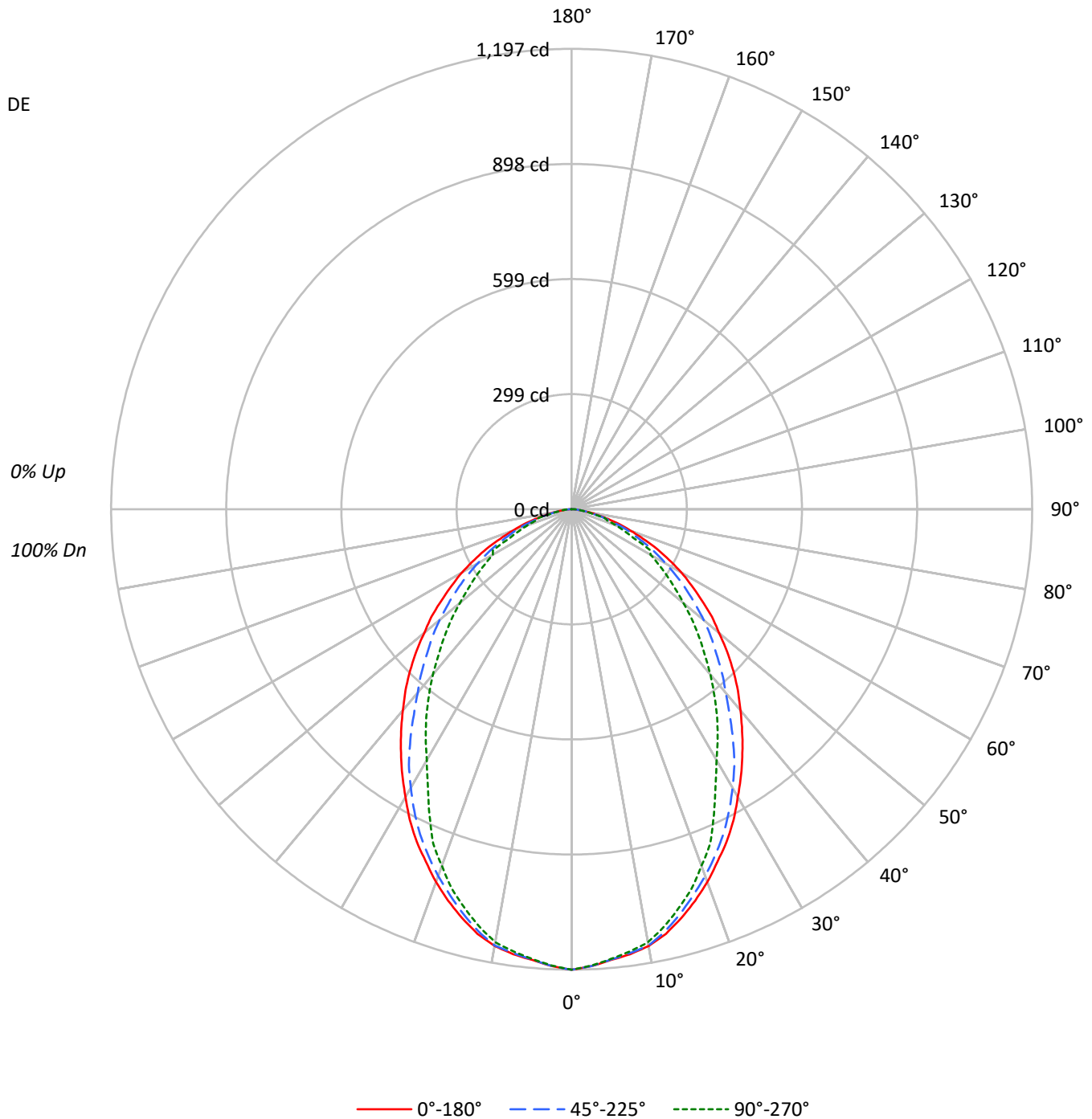
Lumens per Lamp: N/A
Luminaire Lumens: 2350.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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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°	1611	1611	1611
5°	1589	1587	1585
10°	1575	1573	1562
15°	1533	1517	1496
20°	1476	1452	1413
25°	1416	1385	1298
30°	1342	1299	1170
35°	1271	1200	1082
40°	1198	1094	984
45°	1130	1011	890
50°	1046	939	794
55°	967	851	711
60°	886	760	637
65°	780	665	564
70°	642	583	479
75°	511	446	468
80°	343	322	300
85°	213	256	299

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1130 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.4	4.7
10°-20°	305.8	13.0
20°-30°	423.4	18.0
30°-40°	451.4	19.2
40°-50°	411.8	17.5
50°-60°	322.6	13.7
60°-70°	210.3	8.9
70°-80°	93.2	4.0
80°-90°	20.0	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°	840.6	35.8
0°-40°	1292.1	55.0
0°-60°	2026.6	86.2
0°-90°	2350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2350.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1197	1197	1197	1197	1197	
5°	1176	1175	1175	1174	1174	112
15°	1100	1100	1089	1078	1074	309
25°	954	948	933	900	875	438
35°	774	768	731	675	659	484
45°	594	581	531	487	468	457
55°	412	400	363	320	303	370
65°	245	231	209	213	177	241
75°	98	91	86	82	90	105
85°	14	15	17	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1197.1	1197.1	1197.1	1197.1	1197.1
2.5°	1188.8	1188.8	1188.8	1187.4	1187.4
5°	1176.3	1174.9	1174.9	1173.5	1173.5
7.5°	1166.6	1165.2	1163.8	1162.5	1159.7
10°	1152.8	1152.8	1151.4	1144.5	1143.1
12.5°	1130.6	1129.2	1123.7	1114.0	1111.3
15°	1100.2	1100.2	1089.1	1078.0	1073.9
17.5°	1067.0	1065.6	1051.8	1040.7	1035.1
20°	1031.0	1028.2	1014.4	996.4	986.7
22.5°	990.9	990.9	974.3	950.7	941.0
25°	953.5	948.0	932.7	899.5	874.6
27.5°	910.6	902.3	885.7	838.6	809.6
30°	863.5	859.4	835.9	775.0	752.8
32.5°	819.3	812.3	787.4	723.8	705.8
35°	773.6	768.1	730.7	675.3	658.7
37.5°	727.9	721.0	674.0	629.7	608.9
40°	682.3	674.0	622.7	582.6	560.5
42.5°	639.4	628.3	578.5	535.6	510.7
45°	593.7	581.2	531.4	487.1	467.8
47.5°	548.0	536.9	491.3	445.6	423.5
50°	499.6	489.9	448.4	402.7	379.2
52.5°	459.4	444.2	404.1	358.4	339.1
55°	412.4	399.9	362.6	319.7	303.1
57.5°	369.5	357.0	322.4	282.3	268.5
60°	329.4	311.4	282.3	247.7	236.6
62.5°	285.1	271.2	246.3	217.3	231.1
65°	244.9	231.1	209.0	213.1	177.1
67.5°	200.7	193.7	174.4	155.0	149.5
70°	163.3	155.0	148.1	127.3	121.8
72.5°	130.1	121.8	112.1	101.0	96.9
75°	98.3	91.3	85.8	81.6	90.0
77.5°	67.8	65.0	60.9	56.7	55.4
80°	44.3	42.9	41.5	40.1	38.7
82.5°	26.3	26.3	26.3	26.3	26.3
85°	13.8	15.2	16.6	18.0	19.4
87.5°	8.3	8.3	9.7	11.1	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)