

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: P562246

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562246
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-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2320.0 lumens
Efficiency: N/A
Efficacy: 99.1 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

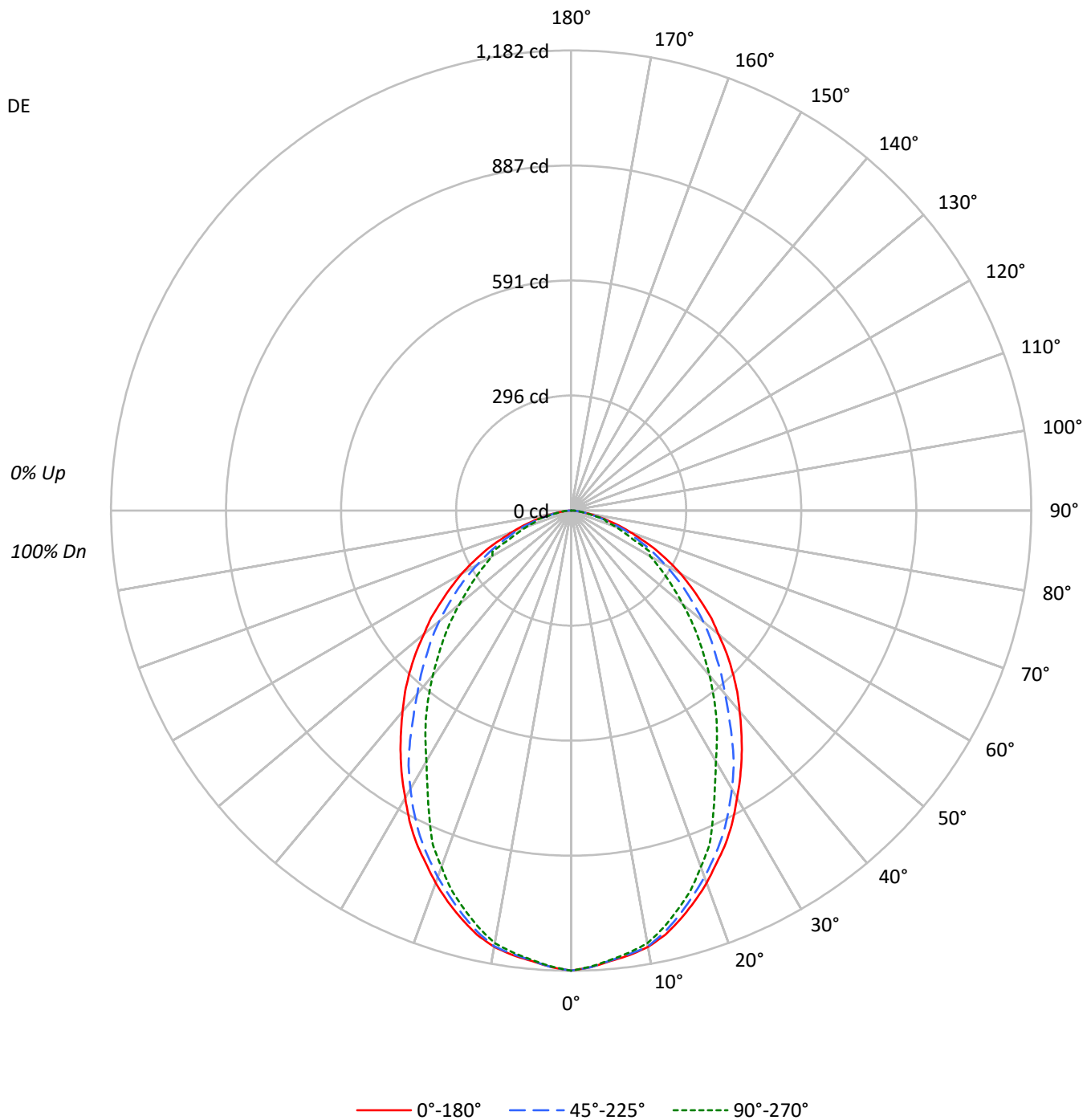
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1590	1590	1590
5°	1568	1567	1565
10°	1555	1553	1542
15°	1513	1498	1477
20°	1457	1434	1395
25°	1397	1367	1282
30°	1324	1282	1155
35°	1254	1185	1068
40°	1183	1080	972
45°	1115	998	879
50°	1032	927	783
55°	955	840	702
60°	875	750	629
65°	770	657	557
70°	634	575	473
75°	504	440	462
80°	339	318	297
85°	211	253	295

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1115 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	4.7
10°-20°	301.9	13.0
20°-30°	418.0	18.0
30°-40°	445.7	19.2
40°-50°	406.6	17.5
50°-60°	318.5	13.7
60°-70°	207.6	8.9
70°-80°	92.0	4.0
80°-90°	19.8	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°	829.9	35.8
0°-40°	1275.6	55.0
0°-60°	2000.7	86.2
0°-90°	2320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1182	1182	1182	1182	1182	
5°	1161	1160	1160	1159	1159	110
15°	1086	1086	1075	1064	1060	305
25°	941	936	921	888	863	432
35°	764	758	721	667	650	477
45°	586	574	525	481	462	451
55°	407	395	358	316	299	365
65°	242	228	206	210	175	238
75°	97	90	85	81	89	104
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1181.8	1181.8	1181.8	1181.8	1181.8
2.5°	1173.6	1173.6	1173.6	1172.2	1172.2
5°	1161.3	1159.9	1159.9	1158.6	1158.6
7.5°	1151.7	1150.4	1149.0	1147.6	1144.9
10°	1138.1	1138.1	1136.7	1129.9	1128.5
12.5°	1116.2	1114.8	1109.4	1099.8	1097.1
15°	1086.1	1086.1	1075.2	1064.3	1060.2
17.5°	1053.4	1052.0	1038.3	1027.4	1021.9
20°	1017.8	1015.1	1001.4	983.7	974.1
22.5°	978.2	978.2	961.8	938.6	929.0
25°	941.3	935.9	920.8	888.0	863.4
27.5°	899.0	890.8	874.4	827.9	799.2
30°	852.5	848.4	825.2	765.1	743.2
32.5°	808.8	802.0	777.4	714.5	696.8
35°	763.7	758.2	721.4	666.7	650.3
37.5°	718.6	711.8	665.3	621.6	601.1
40°	673.5	665.3	614.8	575.2	553.3
42.5°	631.2	620.3	571.1	528.7	504.1
45°	586.1	573.8	524.6	480.9	461.8
47.5°	541.0	530.1	485.0	439.9	418.1
50°	493.2	483.6	442.7	397.6	374.3
52.5°	453.6	438.6	398.9	353.8	334.7
55°	407.1	394.8	357.9	315.6	299.2
57.5°	364.8	352.5	318.3	278.7	265.0
60°	325.2	307.4	278.7	244.6	233.6
62.5°	281.4	267.8	243.2	214.5	228.2
65°	241.8	228.2	206.3	210.4	174.9
67.5°	198.1	191.3	172.1	153.0	147.6
70°	161.2	153.0	146.2	125.7	120.2
72.5°	128.4	120.2	110.7	99.7	95.6
75°	97.0	90.2	84.7	80.6	88.8
77.5°	66.9	64.2	60.1	56.0	54.6
80°	43.7	42.4	41.0	39.6	38.3
82.5°	26.0	26.0	26.0	26.0	26.0
85°	13.7	15.0	16.4	17.8	19.1
87.5°	8.2	8.2	9.6	10.9	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)