

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: P561926

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561926
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

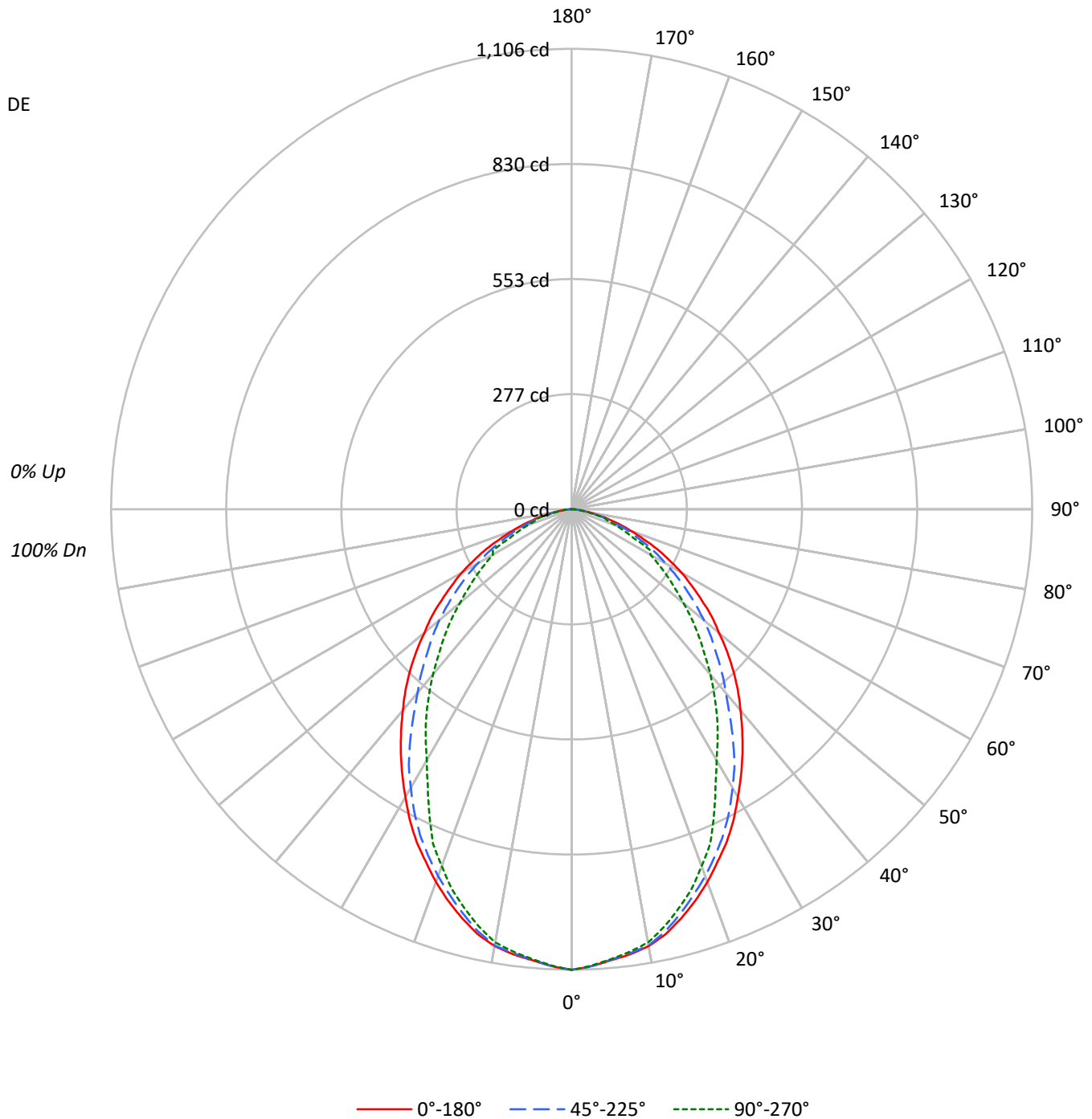
Lumens per Lamp: N/A
Luminaire Lumens: 2172.0 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	1489	1489	1489
5°	1468	1467	1465
10°	1456	1454	1443
15°	1416	1402	1383
20°	1364	1342	1306
25°	1308	1280	1200
30°	1240	1200	1081
35°	1174	1109	1000
40°	1108	1011	910
45°	1044	935	823
50°	966	867	734
55°	894	786	657
60°	819	702	589
65°	721	615	521
70°	594	539	443
75°	472	412	432
80°	317	298	277
85°	198	236	276

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1044 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.0	4.7
10°-20°	282.6	13.0
20°-30°	391.3	18.0
30°-40°	417.2	19.2
40°-50°	380.7	17.5
50°-60°	298.2	13.7
60°-70°	194.4	8.9
70°-80°	86.1	4.0
80°-90°	18.5	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°	776.9	35.8
0°-40°	1194.2	55.0
0°-60°	1873.1	86.2
0°-90°	2172.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2172.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1087	1086	1086	1085	1085	103
15°	1017	1017	1007	996	993	286
25°	881	876	862	831	808	405
35°	715	710	675	624	609	447
45°	549	537	491	450	432	423
55°	381	370	335	296	280	342
65°	226	214	193	197	164	223
75°	91	84	79	76	83	97
85°	13	14	15	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1106.4	1106.4	1106.4	1106.4	1106.4
2.5°	1098.7	1098.7	1098.7	1097.4	1097.4
5°	1087.2	1085.9	1085.9	1084.6	1084.6
7.5°	1078.2	1077.0	1075.7	1074.4	1071.9
10°	1065.5	1065.5	1064.2	1057.8	1056.5
12.5°	1045.0	1043.7	1038.6	1029.6	1027.1
15°	1016.9	1016.9	1006.6	996.4	992.6
17.5°	986.2	984.9	972.1	961.9	956.7
20°	952.9	950.3	937.6	920.9	912.0
22.5°	915.8	915.8	900.5	878.7	869.8
25°	881.3	876.2	862.1	831.4	808.4
27.5°	841.6	833.9	818.6	775.1	748.3
30°	798.1	794.3	772.6	716.3	695.8
32.5°	757.2	750.8	727.8	668.9	652.3
35°	715.0	709.9	675.3	624.2	608.8
37.5°	672.8	666.4	622.9	582.0	562.8
40°	630.6	622.9	575.6	538.5	518.0
42.5°	590.9	580.7	534.6	495.0	472.0
45°	548.7	537.2	491.2	450.2	432.3
47.5°	506.5	496.3	454.1	411.9	391.4
50°	461.7	452.8	414.4	372.2	350.5
52.5°	424.6	410.6	373.5	331.3	313.4
55°	381.2	369.6	335.1	295.5	280.1
57.5°	341.5	330.0	298.0	260.9	248.1
60°	304.4	287.8	260.9	229.0	218.7
62.5°	263.5	250.7	227.7	200.8	213.6
65°	226.4	213.6	193.1	197.0	163.7
67.5°	185.5	179.1	161.2	143.3	138.1
70°	150.9	143.3	136.9	117.7	112.6
72.5°	120.2	112.6	103.6	93.4	89.5
75°	90.8	84.4	79.3	75.5	83.1
77.5°	62.7	60.1	56.3	52.4	51.2
80°	40.9	39.7	38.4	37.1	35.8
82.5°	24.3	24.3	24.3	24.3	24.3
85°	12.8	14.1	15.3	16.6	17.9
87.5°	7.7	7.7	9.0	10.2	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)