

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: P562322

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562322
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-LD4-1STD-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: 2976.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

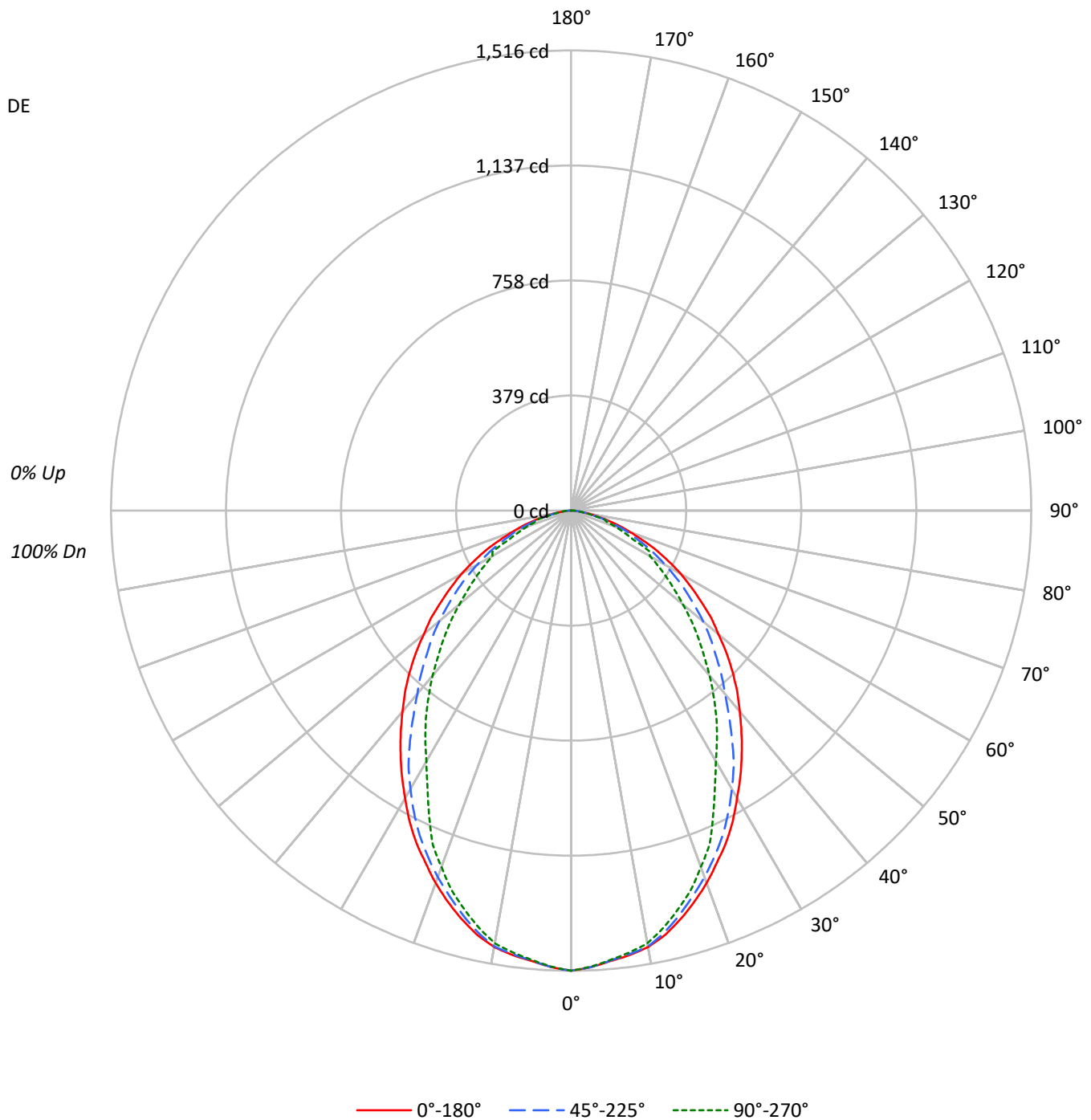
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2040	2040	2040
5°	2012	2010	2007
10°	1995	1992	1978
15°	1941	1921	1894
20°	1869	1839	1789
25°	1793	1754	1644
30°	1699	1645	1481
35°	1609	1520	1370
40°	1518	1385	1247
45°	1431	1281	1127
50°	1324	1189	1005
55°	1225	1077	900
60°	1122	962	806
65°	988	842	714
70°	814	738	607
75°	647	565	592
80°	435	408	380
85°	270	324	378

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1431 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	4.7
10°-20°	387.3	13.0
20°-30°	536.1	18.0
30°-40°	571.7	19.2
40°-50°	521.6	17.5
50°-60°	408.6	13.7
60°-70°	266.3	8.9
70°-80°	118.0	4.0
80°-90°	25.3	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°	1064.5	35.8
0°-40°	1636.2	55.0
0°-60°	2566.4	86.2
0°-90°	2976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1516	1516	1516	1516	1516	
5°	1490	1488	1488	1486	1486	141
15°	1393	1393	1379	1365	1360	392
25°	1208	1200	1181	1139	1108	554
35°	980	973	925	855	834	612
45°	752	736	673	617	592	579
55°	522	506	459	405	384	468
65°	310	293	265	270	224	306
75°	124	116	109	103	114	133
85°	18	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1515.9	1515.9	1515.9	1515.9	1515.9
2.5°	1505.4	1505.4	1505.4	1503.7	1503.7
5°	1489.6	1487.9	1487.9	1486.1	1486.1
7.5°	1477.4	1475.6	1473.9	1472.1	1468.6
10°	1459.9	1459.9	1458.1	1449.3	1447.6
12.5°	1431.8	1430.1	1423.1	1410.8	1407.3
15°	1393.3	1393.3	1379.2	1365.2	1360.0
17.5°	1351.2	1349.4	1331.9	1317.9	1310.9
20°	1305.6	1302.1	1284.6	1261.8	1249.6
22.5°	1254.8	1254.8	1233.8	1204.0	1191.7
25°	1207.5	1200.5	1181.2	1139.1	1107.6
27.5°	1153.2	1142.6	1121.6	1062.0	1025.2
30°	1093.6	1088.3	1058.5	981.4	953.4
32.5°	1037.5	1028.7	997.2	916.6	893.8
35°	979.7	972.7	925.3	855.2	834.2
37.5°	921.8	913.1	853.5	797.4	771.1
40°	864.0	853.5	788.6	737.8	709.8
42.5°	809.7	795.6	732.6	678.2	646.7
45°	751.8	736.1	673.0	616.9	592.4
47.5°	694.0	680.0	622.1	564.3	536.3
50°	632.7	620.4	567.8	510.0	480.2
52.5°	581.8	562.6	511.7	453.9	429.4
55°	522.3	506.5	459.2	404.8	383.8
57.5°	467.9	452.2	408.3	357.5	340.0
60°	417.1	394.3	357.5	313.7	299.7
62.5°	361.0	343.5	311.9	275.1	292.7
65°	310.2	292.7	264.6	269.9	224.3
67.5°	254.1	245.4	220.8	196.3	189.3
70°	206.8	196.3	187.5	161.2	154.2
72.5°	164.7	154.2	142.0	127.9	122.7
75°	124.4	115.7	108.7	103.4	113.9
77.5°	85.9	82.4	77.1	71.9	70.1
80°	56.1	54.3	52.6	50.8	49.1
82.5°	33.3	33.3	33.3	33.3	33.3
85°	17.5	19.3	21.0	22.8	24.5
87.5°	10.5	10.5	12.3	14.0	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)