

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: P562456

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562456
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-50-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2738.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

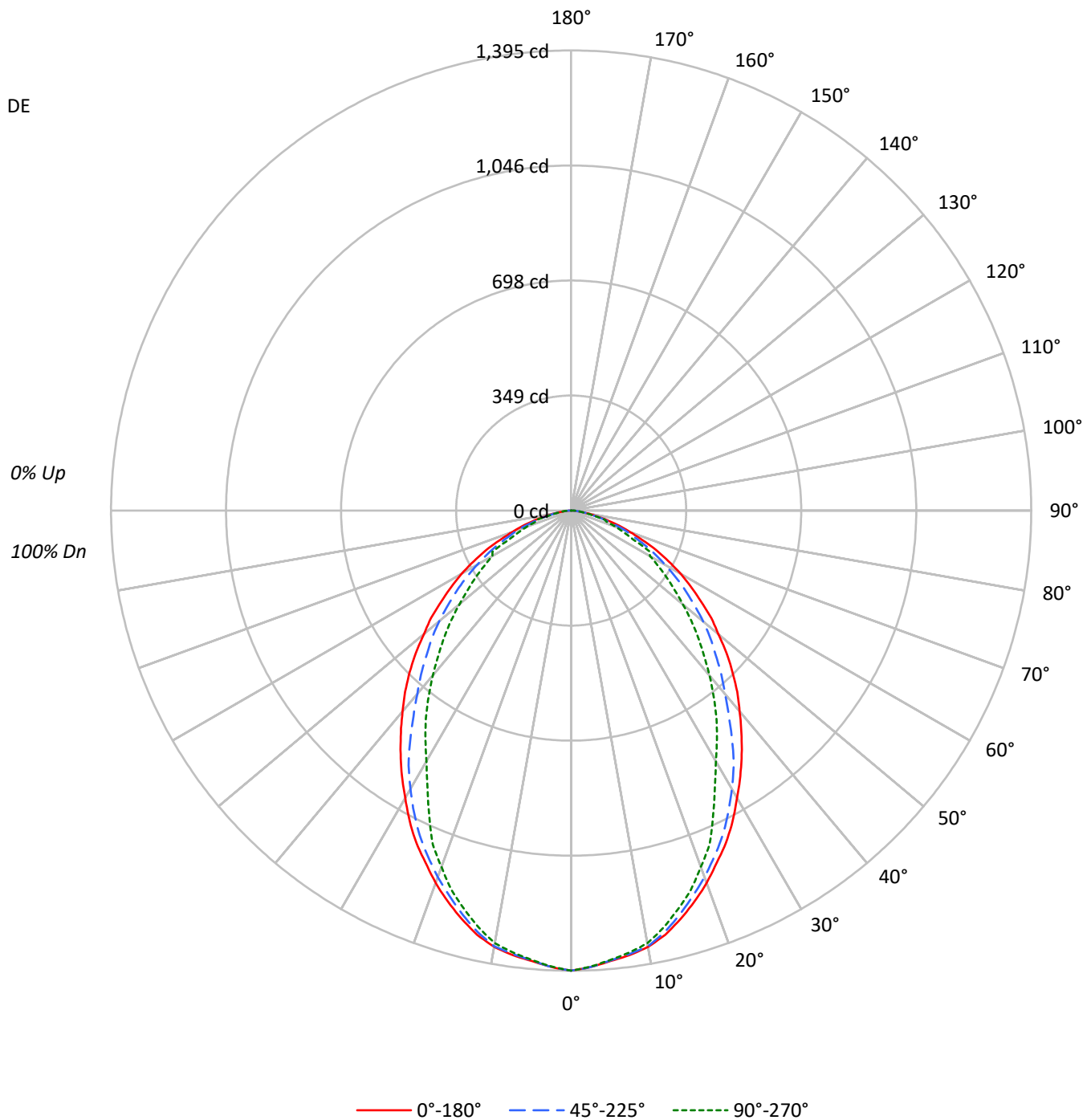
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1877	1877	1877
5°	1851	1849	1847
10°	1835	1833	1820
15°	1785	1768	1743
20°	1720	1692	1646
25°	1649	1613	1513
30°	1563	1513	1363
35°	1480	1398	1261
40°	1396	1274	1147
45°	1316	1178	1037
50°	1218	1093	925
55°	1127	991	828
60°	1033	885	742
65°	909	775	657
70°	749	679	558
75°	595	520	545
80°	400	375	349
85°	249	298	349

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.8	4.7
10°-20°	356.3	13.0
20°-30°	493.3	18.0
30°-40°	526.0	19.2
40°-50°	479.9	17.5
50°-60°	375.9	13.7
60°-70°	245.0	8.9
70°-80°	108.5	4.0
80°-90°	23.3	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°	979.4	35.8
0°-40°	1505.4	55.0
0°-60°	2361.1	86.2
0°-90°	2738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1395	1395	1395	1395	1395	
5°	1370	1369	1369	1367	1367	130
15°	1282	1282	1269	1256	1251	360
25°	1111	1104	1087	1048	1019	510
35°	901	895	851	787	768	563
45°	692	677	619	568	545	533
55°	480	466	422	372	353	431
65°	285	269	244	248	206	281
75°	114	106	100	95	105	123
85°	16	18	19	21	23	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1394.7	1394.7	1394.7	1394.7	1394.7
2.5°	1385.0	1385.0	1385.0	1383.4	1383.4
5°	1370.5	1368.9	1368.9	1367.3	1367.3
7.5°	1359.2	1357.6	1356.0	1354.4	1351.2
10°	1343.1	1343.1	1341.5	1333.4	1331.8
12.5°	1317.3	1315.7	1309.2	1298.0	1294.7
15°	1281.8	1281.8	1268.9	1256.0	1251.2
17.5°	1243.1	1241.5	1225.4	1212.5	1206.1
20°	1201.2	1198.0	1181.9	1160.9	1149.6
22.5°	1154.5	1154.5	1135.1	1107.7	1096.4
25°	1110.9	1104.5	1086.7	1048.0	1019.0
27.5°	1060.9	1051.3	1031.9	977.1	943.2
30°	1006.1	1001.3	973.9	902.9	877.1
32.5°	954.5	946.5	917.4	843.3	822.3
35°	901.3	894.9	851.3	786.8	767.5
37.5°	848.1	840.0	785.2	733.6	709.4
40°	794.9	785.2	725.6	678.8	653.0
42.5°	744.9	732.0	674.0	624.0	595.0
45°	691.7	677.2	619.2	567.6	545.0
47.5°	638.5	625.6	572.4	519.2	493.4
50°	582.1	570.8	522.4	469.2	441.8
52.5°	535.3	517.6	470.8	417.6	395.0
55°	480.5	466.0	422.4	372.5	353.1
57.5°	430.5	416.0	375.7	328.9	312.8
60°	383.7	362.8	328.9	288.6	275.7
62.5°	332.1	316.0	287.0	253.1	269.3
65°	285.4	269.3	243.5	248.3	206.4
67.5°	233.8	225.7	203.2	180.6	174.1
70°	190.3	180.6	172.5	148.3	141.9
72.5°	151.6	141.9	130.6	117.7	112.9
75°	114.5	106.4	100.0	95.1	104.8
77.5°	79.0	75.8	70.9	66.1	64.5
80°	51.6	50.0	48.4	46.8	45.1
82.5°	30.6	30.6	30.6	30.6	30.6
85°	16.1	17.7	19.3	21.0	22.6
87.5°	9.7	9.7	11.3	12.9	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)