

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: P590536

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590536
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3LO-35-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3812.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

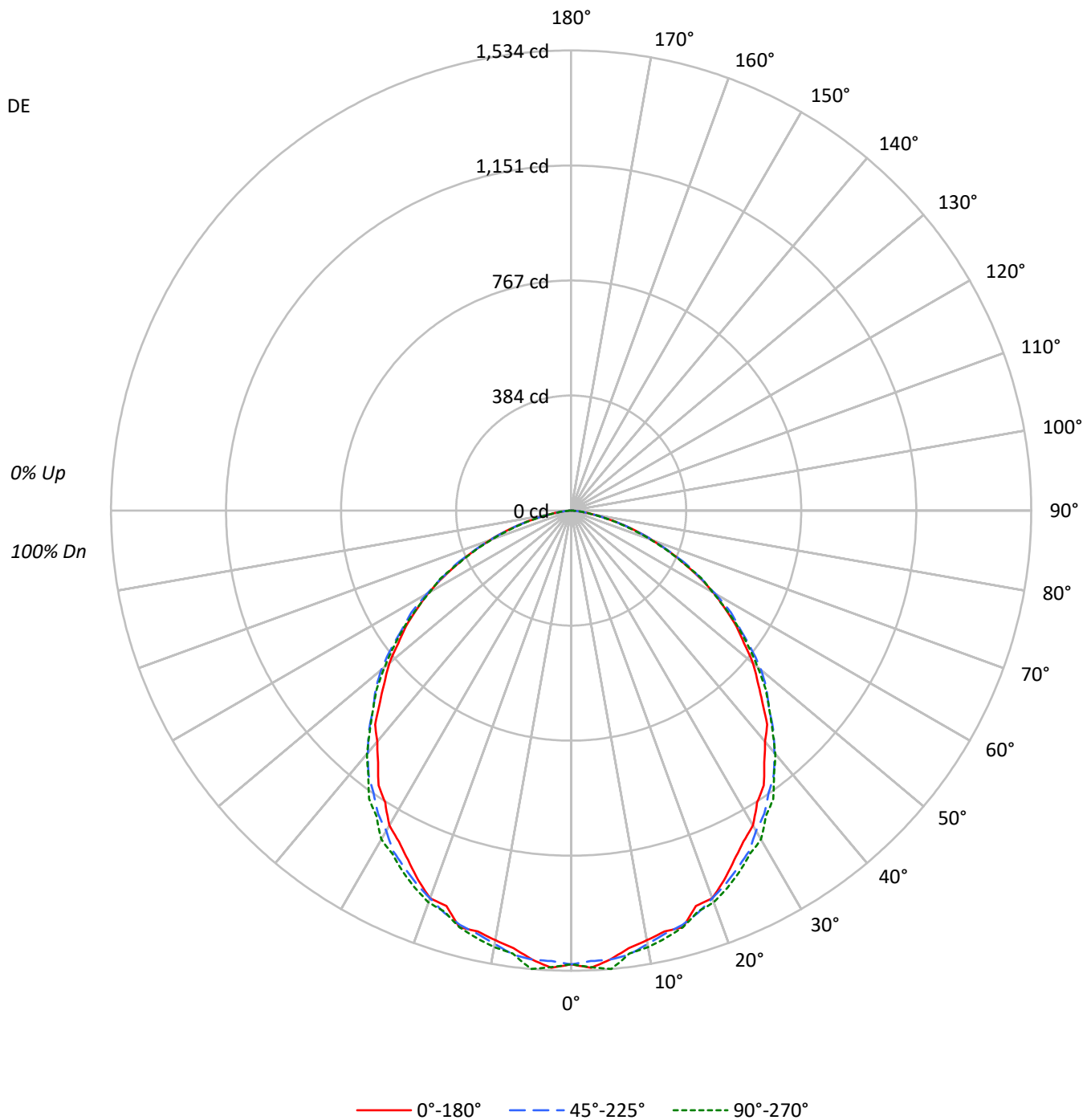
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4070	4070	4070
5°	4057	4058	4144
10°	3974	4009	4037
15°	4006	3984	4006
20°	3938	3938	3980
25°	3817	3901	3944
30°	3765	3831	3933
35°	3676	3772	3857
40°	3533	3703	3720
45°	3426	3548	3553
50°	3314	3463	3397
55°	3157	3218	3196
60°	2953	2982	2928
65°	2632	2700	2614
70°	2259	2266	2203
75°	1788	1785	1716
80°	1198	1165	1120
85°	651	645	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3639 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.3	3.7
10°-20°	403.2	10.6
20°-30°	604.1	15.8
30°-40°	716.0	18.8
40°-50°	717.3	18.8
50°-60°	608.9	16.0
60°-70°	410.5	10.8
70°-80°	180.4	4.7
80°-90°	29.3	0.8
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°	1149.6	30.2
0°-40°	1865.6	48.9
0°-60°	3191.8	83.7
0°-90°	3812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3812.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1512	1512	1512	1512	1512	
5°	1502	1498	1502	1498	1534	142
15°	1438	1421	1430	1438	1438	401
25°	1286	1293	1314	1331	1328	594
35°	1119	1122	1148	1175	1174	695
45°	900	917	932	956	934	696
55°	673	668	686	681	681	599
65°	413	408	424	408	410	411
75°	172	168	172	160	165	184
85°	21	20	21	20	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1512.5	1512.5	1512.5	1512.5	1512.5
2.5°	1525.6	1514.1	1503.3	1515.8	1523.4
5°	1501.8	1498.2	1502.4	1497.9	1534.0
7.5°	1470.9	1484.4	1492.2	1487.3	1489.5
10°	1454.5	1449.8	1467.2	1479.3	1477.5
12.5°	1436.9	1444.0	1444.9	1458.0	1459.2
15°	1437.9	1421.3	1430.1	1437.5	1438.1
17.5°	1382.1	1400.0	1406.1	1423.1	1402.0
20°	1375.2	1362.1	1375.2	1392.6	1389.9
22.5°	1333.2	1318.6	1346.7	1362.1	1361.2
25°	1285.6	1292.6	1313.7	1330.9	1328.2
27.5°	1243.8	1252.0	1282.1	1305.7	1290.5
30°	1211.6	1207.5	1232.9	1253.9	1265.7
32.5°	1154.0	1168.8	1198.5	1219.4	1208.2
35°	1119.0	1122.3	1148.3	1174.9	1174.1
37.5°	1057.9	1073.3	1109.8	1117.2	1110.4
40°	1005.7	1021.2	1054.2	1062.2	1058.9
42.5°	967.3	970.0	998.3	1007.5	992.8
45°	900.3	917.1	932.3	956.3	933.7
47.5°	843.3	851.1	883.9	890.3	878.4
50°	791.5	794.2	827.2	819.2	811.4
52.5°	726.5	738.0	756.5	755.0	745.8
55°	673.0	668.5	686.0	681.4	681.2
57.5°	608.7	616.5	631.0	623.6	611.6
60°	548.6	548.8	554.0	545.6	544.1
62.5°	481.6	483.9	485.1	474.7	491.5
65°	413.4	408.0	424.0	407.8	410.5
67.5°	350.7	353.5	351.9	341.8	345.7
70°	287.1	290.6	288.0	276.5	280.0
72.5°	228.9	224.6	227.3	212.9	219.5
75°	172.0	168.5	171.7	159.6	165.0
77.5°	117.2	119.9	118.0	111.5	115.2
80°	77.3	75.2	75.2	71.5	72.3
82.5°	45.1	43.0	42.4	41.2	43.0
85°	21.1	20.5	20.9	20.3	19.5
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)