

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: P590345

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590345
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-LD4-2STD-35-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3064.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

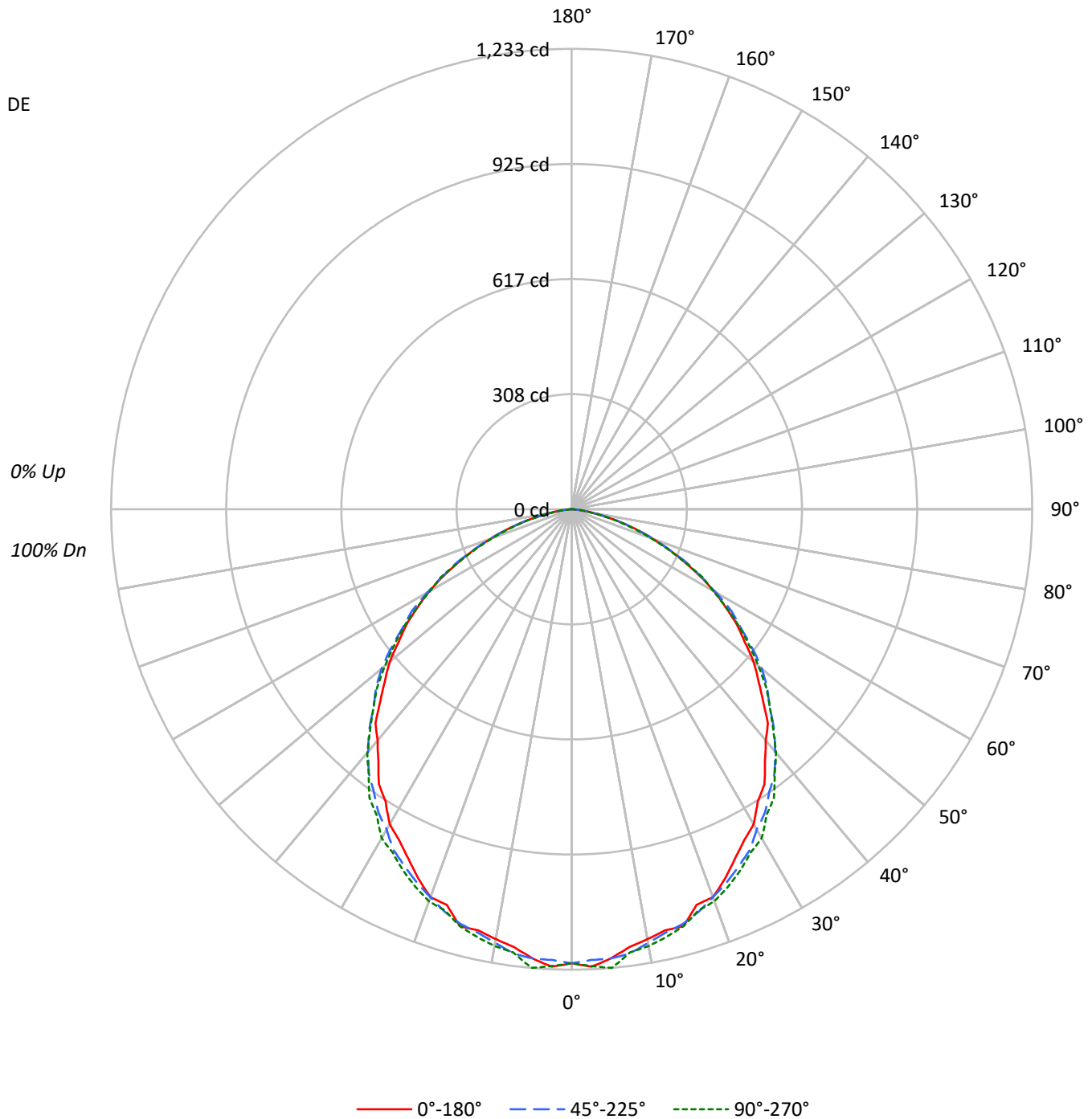
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3271	3271	3271
5°	3261	3262	3331
10°	3195	3222	3245
15°	3220	3202	3220
20°	3166	3166	3199
25°	3068	3135	3170
30°	3026	3079	3161
35°	2955	3032	3100
40°	2840	2976	2990
45°	2754	2852	2856
50°	2663	2784	2730
55°	2538	2587	2569
60°	2373	2397	2354
65°	2116	2170	2101
70°	1815	1821	1771
75°	1438	1435	1379
80°	964	936	900
85°	525	519	485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.4	3.7
10°-20°	324.1	10.6
20°-30°	485.6	15.8
30°-40°	575.5	18.8
40°-50°	576.6	18.8
50°-60°	489.4	16.0
60°-70°	330.0	10.8
70°-80°	145.0	4.7
80°-90°	23.6	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°	924.0	30.2
0°-40°	1499.5	48.9
0°-60°	2565.5	83.7
0°-90°	3064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1207	1204	1208	1204	1233	114
15°	1156	1142	1150	1155	1156	322
25°	1033	1039	1056	1070	1068	478
35°	899	902	923	944	944	558
45°	724	737	749	769	750	560
55°	541	537	551	548	548	481
65°	332	328	341	328	330	330
75°	138	136	138	128	133	148
85°	17	16	17	16	16	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1215.7	1215.7	1215.7	1215.7	1215.7
2.5°	1226.2	1217.0	1208.3	1218.4	1224.5
5°	1207.1	1204.3	1207.6	1203.9	1233.0
7.5°	1182.3	1193.1	1199.4	1195.5	1197.2
10°	1169.1	1165.3	1179.3	1189.0	1187.6
12.5°	1155.0	1160.6	1161.4	1171.9	1172.9
15°	1155.8	1142.4	1149.5	1155.4	1155.9
17.5°	1110.9	1125.3	1130.2	1143.8	1126.9
20°	1105.4	1094.9	1105.4	1119.3	1117.1
22.5°	1071.6	1059.8	1082.5	1094.9	1094.1
25°	1033.3	1039.0	1055.9	1069.7	1067.5
27.5°	999.7	1006.3	1030.5	1049.5	1037.2
30°	973.8	970.5	990.9	1007.9	1017.3
32.5°	927.5	939.5	963.3	980.1	971.2
35°	899.4	902.1	923.0	944.3	943.7
37.5°	850.3	862.7	892.0	898.0	892.5
40°	808.4	820.8	847.3	853.7	851.1
42.5°	777.5	779.7	802.4	809.8	798.0
45°	723.6	737.1	749.4	768.7	750.5
47.5°	677.8	684.1	710.4	715.6	706.0
50°	636.2	638.4	664.9	658.5	652.2
52.5°	583.9	593.2	608.1	606.8	599.5
55°	540.9	537.3	551.4	547.7	547.5
57.5°	489.3	495.5	507.2	501.2	491.6
60°	440.9	441.1	445.3	438.6	437.3
62.5°	387.1	389.0	389.9	381.6	395.1
65°	332.3	327.9	340.8	327.7	329.9
67.5°	281.9	284.1	282.9	274.7	277.8
70°	230.7	233.6	231.5	222.3	225.1
72.5°	184.0	180.5	182.7	171.1	176.4
75°	138.3	135.5	138.0	128.2	132.6
77.5°	94.2	96.4	94.8	89.6	92.6
80°	62.2	60.4	60.4	57.5	58.1
82.5°	36.3	34.5	34.1	33.1	34.5
85°	17.0	16.5	16.8	16.3	15.7
87.5°	6.1	6.3	6.3	6.0	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)