

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: P560268

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560268
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-12-2-LD4-2HI-40-UNV-81-96-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2990.0 lumens
Efficiency: N/A
Efficacy: 69.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

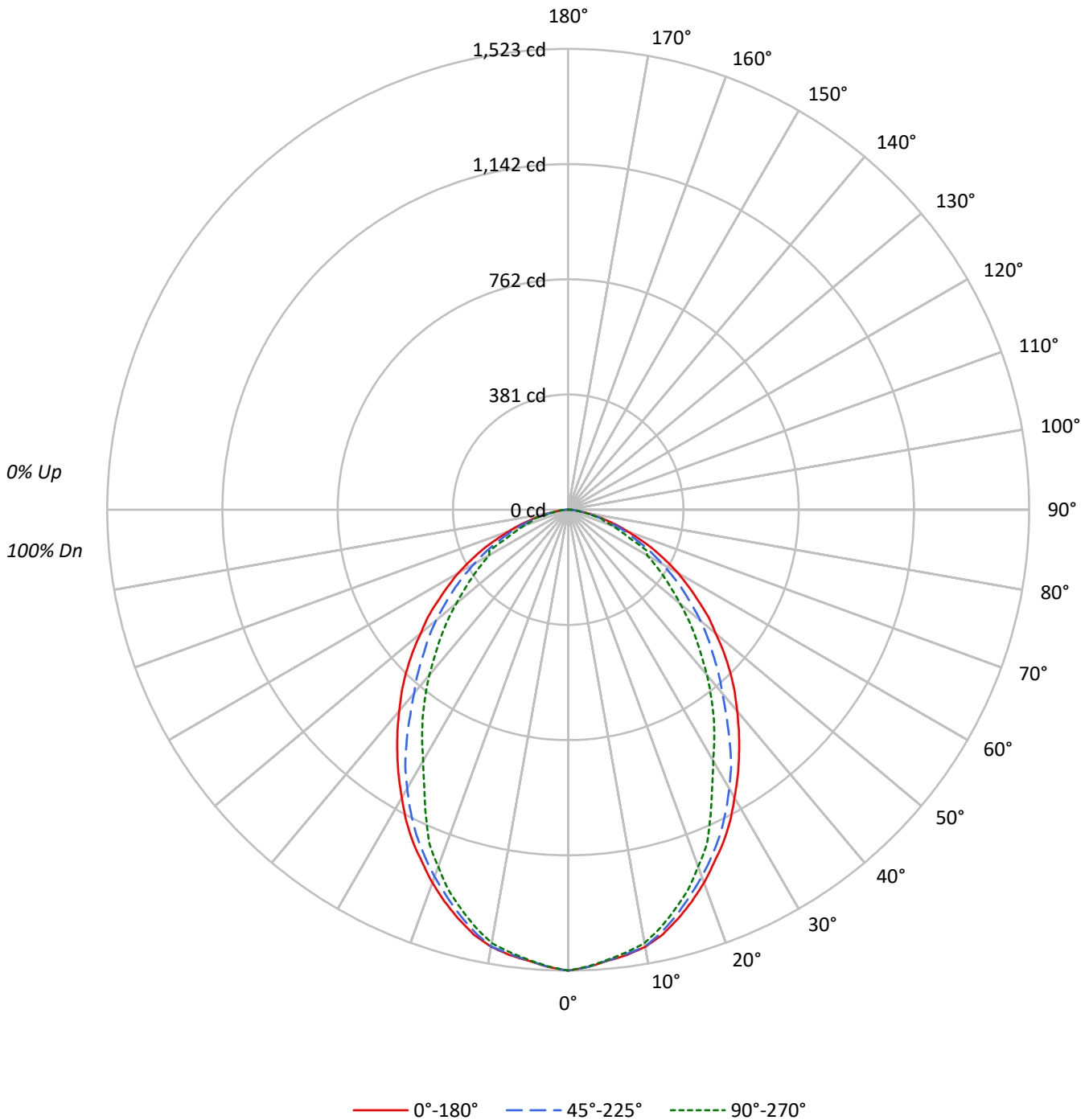
Input Watts (W): 43.2
Input Voltage (V):
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8197	8197	8197
5°	8086	8076	8066
10°	8015	8006	7948
15°	7799	7721	7613
20°	7513	7392	7190
25°	7204	7048	6608
30°	6828	6609	5953
35°	6467	6108	5506
40°	6099	5566	5010
45°	5750	5146	4529
50°	5322	4777	4040
55°	4923	4328	3618
60°	4511	3866	3241
65°	3969	3386	2870
70°	3270	2965	2437
75°	2599	2271	2381
80°	1745	1636	1528
85°	1087	1303	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5750 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.8	4.7
10°-20°	389.1	13.0
20°-30°	538.7	18.0
30°-40°	574.4	19.2
40°-50°	524.0	17.5
50°-60°	410.5	13.7
60°-70°	267.6	8.9
70°-80°	118.5	4.0
80°-90°	25.5	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°	1069.5	35.8
0°-40°	1643.9	55.0
0°-60°	2578.5	86.2
0°-90°	2990.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2990.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1523	1523	1523	1523	1523	
5°	1497	1495	1495	1493	1493	142
15°	1400	1400	1386	1372	1366	394
25°	1213	1206	1187	1144	1113	557
35°	984	977	930	859	838	615
45°	755	740	676	620	595	582
55°	525	509	461	407	386	471
65°	312	294	266	271	225	307
75°	125	116	109	104	114	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1523.1	1523.1	1523.1	1523.1	1523.1
2.5°	1512.5	1512.5	1512.5	1510.7	1510.7
5°	1496.7	1494.9	1494.9	1493.1	1493.1
7.5°	1484.3	1482.6	1480.8	1479.0	1475.5
10°	1466.7	1466.7	1465.0	1456.2	1454.4
12.5°	1438.5	1436.8	1429.7	1417.4	1413.9
15°	1399.8	1399.8	1385.7	1371.6	1366.4
17.5°	1357.6	1355.8	1338.2	1324.1	1317.1
20°	1311.8	1308.3	1290.6	1267.8	1255.4
22.5°	1260.7	1260.7	1239.6	1209.6	1197.3
25°	1213.2	1206.1	1186.8	1144.5	1112.8
27.5°	1158.6	1148.0	1126.9	1067.0	1030.1
30°	1098.7	1093.4	1063.5	986.0	957.9
32.5°	1042.4	1033.6	1001.9	920.9	898.0
35°	984.3	977.2	929.7	859.3	838.1
37.5°	926.2	917.4	857.5	801.2	774.7
40°	868.1	857.5	792.3	741.3	713.1
42.5°	813.5	799.4	736.0	681.4	649.7
45°	755.4	739.5	676.1	619.8	595.1
47.5°	697.3	683.2	625.1	567.0	538.8
50°	635.6	623.3	570.5	512.4	482.5
52.5°	584.6	565.2	514.1	456.0	431.4
55°	524.7	508.9	461.3	406.7	385.6
57.5°	470.1	454.3	410.3	359.2	341.6
60°	419.1	396.2	359.2	315.2	301.1
62.5°	362.7	345.1	313.4	276.4	294.0
65°	311.7	294.0	265.9	271.2	225.4
67.5°	255.3	246.5	221.9	197.2	190.2
70°	207.8	197.2	188.4	162.0	154.9
72.5°	165.5	154.9	142.6	128.5	123.3
75°	125.0	116.2	109.2	103.9	114.5
77.5°	86.3	82.8	77.5	72.2	70.4
80°	56.3	54.6	52.8	51.1	49.3
82.5°	33.5	33.5	33.5	33.5	33.5
85°	17.6	19.4	21.1	22.9	24.7
87.5°	10.6	10.6	12.3	14.1	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)