

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: P560653

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560653
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-LD4-2STD-40-UNV-81-96-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2902.0 lumens
Efficiency: N/A
Efficacy: 87.1 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

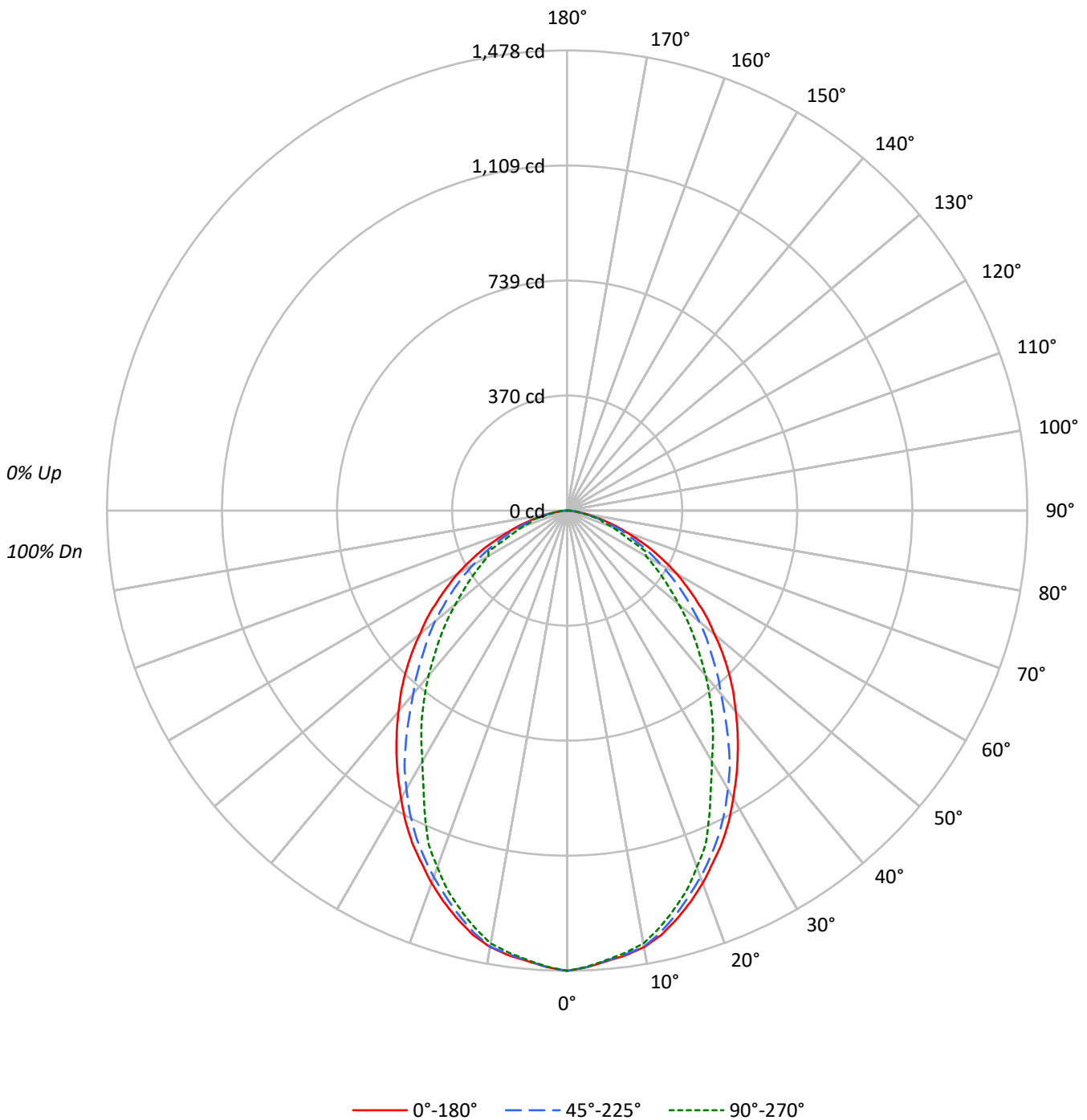
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7956	7956	7956
5°	7848	7839	7829
10°	7780	7770	7714
15°	7570	7494	7389
20°	7292	7175	6979
25°	6992	6840	6414
30°	6627	6415	5778
35°	6276	5928	5345
40°	5919	5403	4862
45°	5580	4994	4396
50°	5165	4636	3921
55°	4779	4201	3512
60°	4378	3752	3145
65°	3852	3287	2785
70°	3174	2878	2367
75°	2522	2204	2310
80°	1695	1590	1485
85°	1056	1266	1476

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5580 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.6	4.7
10°-20°	377.6	13.0
20°-30°	522.8	18.0
30°-40°	557.5	19.2
40°-50°	508.6	17.5
50°-60°	398.4	13.7
60°-70°	259.7	8.9
70°-80°	115.1	4.0
80°-90°	24.7	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°	1038.1	35.8
0°-40°	1595.6	55.0
0°-60°	2502.6	86.2
0°-90°	2902.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2902.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1478	1478	1478	1478	1478	
5°	1453	1451	1451	1449	1449	138
15°	1359	1359	1345	1331	1326	382
25°	1178	1171	1152	1111	1080	541
35°	955	948	902	834	814	597
45°	733	718	656	602	578	565
55°	509	494	448	395	374	457
65°	302	285	258	263	219	298
75°	121	113	106	101	111	130
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1478.2	1478.2	1478.2	1478.2	1478.2
2.5°	1468.0	1468.0	1468.0	1466.3	1466.3
5°	1452.6	1450.9	1450.9	1449.2	1449.2
7.5°	1440.6	1438.9	1437.2	1435.5	1432.1
10°	1423.6	1423.6	1421.8	1413.3	1411.6
12.5°	1396.2	1394.5	1387.7	1375.7	1372.3
15°	1358.6	1358.6	1344.9	1331.3	1326.1
17.5°	1317.6	1315.9	1298.8	1285.1	1278.3
20°	1273.2	1269.7	1252.7	1230.4	1218.5
22.5°	1223.6	1223.6	1203.1	1174.0	1162.1
25°	1177.5	1170.6	1151.8	1110.8	1080.1
27.5°	1124.5	1114.2	1093.7	1035.6	999.7
30°	1066.4	1061.3	1032.2	957.0	929.7
32.5°	1011.7	1003.2	972.4	893.8	871.6
35°	955.3	948.5	902.3	834.0	813.5
37.5°	898.9	890.4	832.3	777.6	751.9
40°	842.5	832.3	769.0	719.5	692.1
42.5°	789.5	775.9	714.3	661.4	630.6
45°	733.1	717.8	656.2	601.5	577.6
47.5°	676.7	663.1	606.7	550.3	522.9
50°	616.9	605.0	553.7	497.3	468.3
52.5°	567.4	548.6	499.0	442.6	418.7
55°	509.3	493.9	447.7	394.8	374.3
57.5°	456.3	440.9	398.2	348.6	331.5
60°	406.7	384.5	348.6	305.9	292.2
62.5°	352.0	335.0	304.2	268.3	285.4
65°	302.5	285.4	258.1	263.2	218.7
67.5°	247.8	239.3	215.3	191.4	184.6
70°	201.7	191.4	182.9	157.2	150.4
72.5°	160.6	150.4	138.4	124.8	119.6
75°	121.3	112.8	106.0	100.8	111.1
77.5°	83.7	80.3	75.2	70.1	68.4
80°	54.7	53.0	51.3	49.6	47.9
82.5°	32.5	32.5	32.5	32.5	32.5
85°	17.1	18.8	20.5	22.2	23.9
87.5°	10.3	10.3	12.0	13.7	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)