

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: P561780

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561780
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-12-4-LD4-2STD-40-UNV-80-86-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5463.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

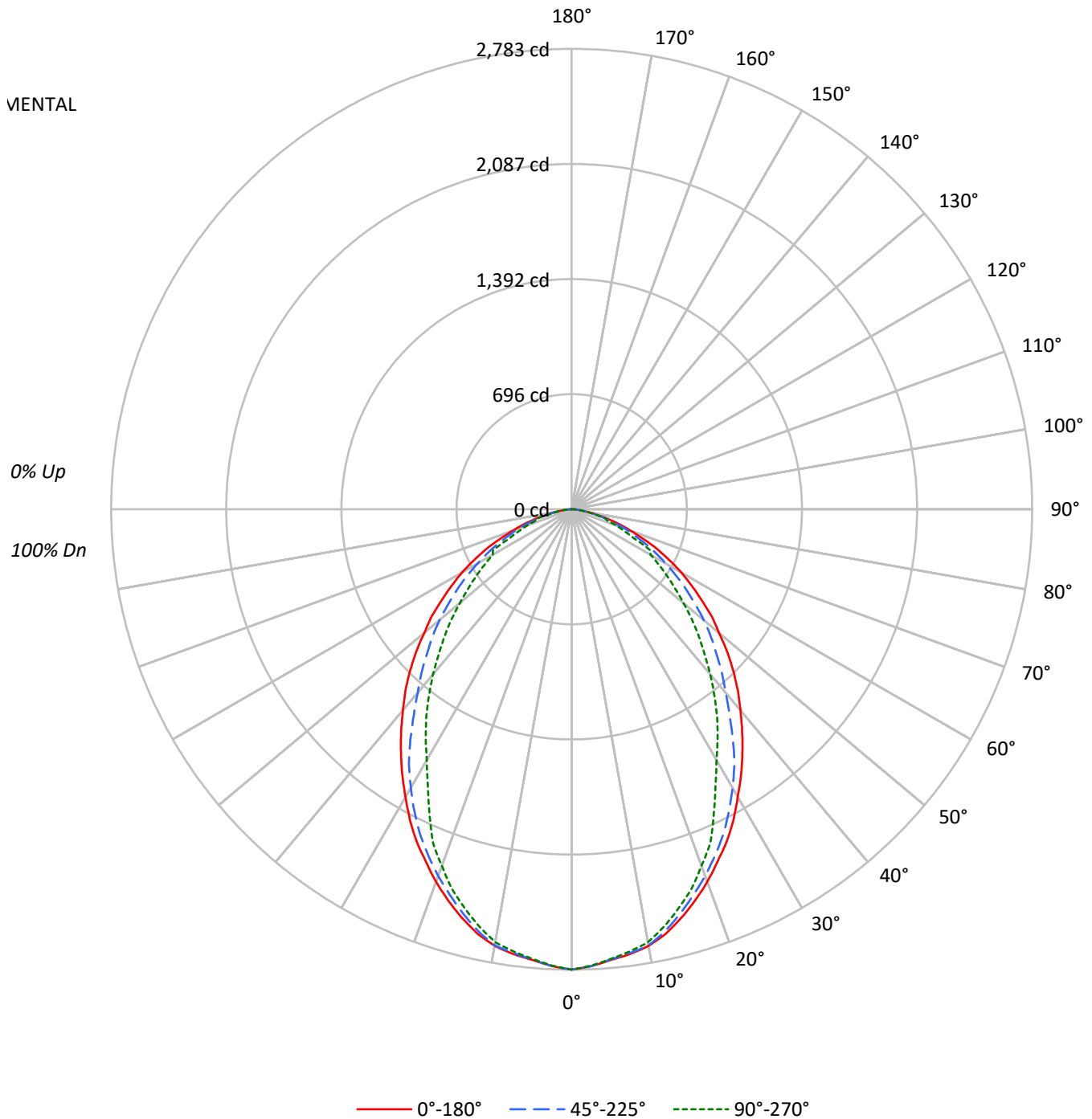
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	7488	7488	7488
5°	7387	7378	7369
10°	7323	7314	7261
15°	7125	7053	6955
20°	6863	6753	6569
25°	6581	6438	6037
30°	6238	6038	5438
35°	5908	5580	5030
40°	5571	5086	4577
45°	5252	4701	4138
50°	4862	4364	3690
55°	4498	3955	3305
60°	4121	3532	2961
65°	3626	3093	2622
70°	2987	2708	2227
75°	2375	2074	2174
80°	1595	1495	1396
85°	994	1192	1389

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5252 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.0	4.7
10°-20°	710.9	13.0
20°-30°	984.2	18.0
30°-40°	1049.4	19.2
40°-50°	957.4	17.5
50°-60°	750.1	13.7
60°-70°	488.8	8.9
70°-80°	216.6	4.0
80°-90°	46.5	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°	1954.2	35.8
0°-40°	3003.6	55.0
0°-60°	4711.1	86.2
0°-90°	5463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5463.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2783	2783	2783	2783	2783	
5°	2734	2731	2731	2728	2728	260
15°	2558	2558	2532	2506	2496	719
25°	2217	2204	2168	2091	2033	1018
35°	1798	1786	1699	1570	1531	1124
45°	1380	1351	1235	1132	1087	1063
55°	959	930	843	743	704	860
65°	569	537	486	495	412	561
75°	228	212	200	190	209	245
85°	32	35	39	42	45	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2782.8	2782.8	2782.8	2782.8	2782.8
2.5°	2763.5	2763.5	2763.5	2760.3	2760.3
5°	2734.5	2731.3	2731.3	2728.1	2728.1
7.5°	2712.0	2708.8	2705.6	2702.4	2695.9
10°	2679.8	2679.8	2676.6	2660.5	2657.3
12.5°	2628.4	2625.1	2612.3	2589.8	2583.3
15°	2557.6	2557.6	2531.8	2506.1	2496.5
17.5°	2480.4	2477.2	2445.0	2419.2	2406.4
20°	2396.7	2390.3	2358.1	2316.3	2293.8
22.5°	2303.4	2303.4	2264.8	2210.1	2187.6
25°	2216.6	2203.7	2168.3	2091.1	2033.2
27.5°	2116.8	2097.5	2058.9	1949.6	1882.0
30°	2007.5	1997.8	1943.1	1801.6	1750.1
32.5°	1904.5	1888.4	1830.5	1682.5	1640.7
35°	1798.4	1785.5	1698.6	1569.9	1531.3
37.5°	1692.2	1676.1	1566.7	1463.8	1415.5
40°	1586.0	1566.7	1447.7	1354.4	1302.9
42.5°	1486.3	1460.6	1344.7	1245.0	1187.1
45°	1380.1	1351.2	1235.4	1132.4	1087.4
47.5°	1274.0	1248.2	1142.1	1035.9	984.4
50°	1161.4	1138.8	1042.3	936.2	881.5
52.5°	1068.1	1032.7	939.4	833.2	788.2
55°	958.7	929.7	842.9	743.1	704.5
57.5°	859.0	830.0	749.6	656.3	624.1
60°	765.7	723.8	656.3	575.9	550.1
62.5°	662.7	630.5	572.6	505.1	537.3
65°	569.4	537.3	485.8	495.4	411.8
67.5°	466.5	450.4	405.4	360.3	347.4
70°	379.6	360.3	344.2	296.0	283.1
72.5°	302.4	283.1	260.6	234.8	225.2
75°	228.4	212.3	199.5	189.8	209.1
77.5°	157.6	151.2	141.6	131.9	128.7
80°	102.9	99.7	96.5	93.3	90.1
82.5°	61.1	61.1	61.1	61.1	61.1
85°	32.2	35.4	38.6	41.8	45.0
87.5°	19.3	19.3	22.5	25.7	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)