

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: P564091

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564091
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-24-4-LD4-4STD-40-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15802.0 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

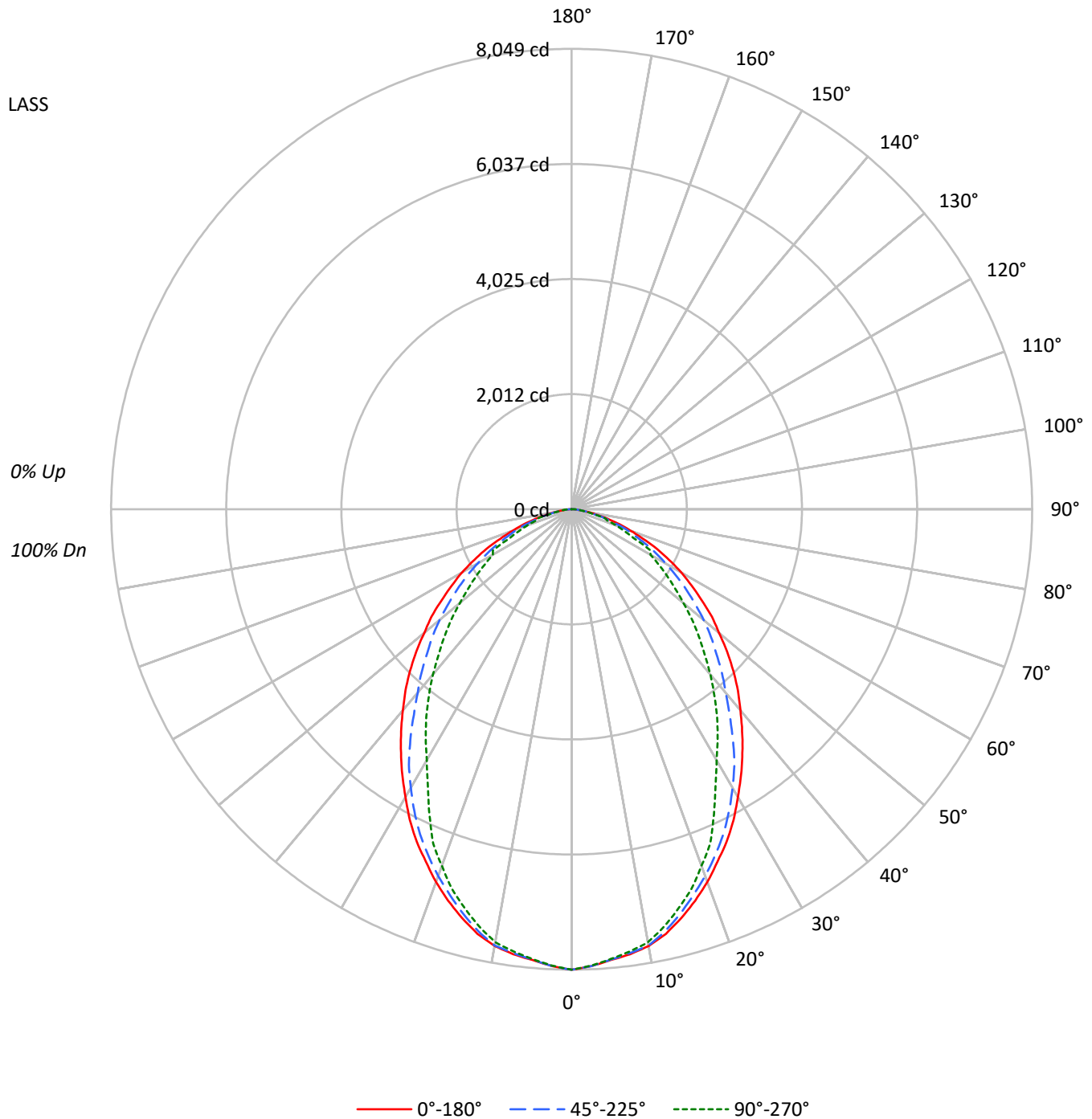
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10830	10830	10830
5°	10683	10671	10658
10°	10590	10578	10502
15°	10305	10201	10059
20°	9927	9767	9500
25°	9518	9311	8731
30°	9022	8732	7865
35°	8544	8070	7276
40°	8058	7355	6620
45°	7596	6799	5985
50°	7032	6311	5337
55°	6505	5719	4780
60°	5960	5108	4282
65°	5244	4473	3792
70°	4320	3917	3222
75°	3435	2999	3145
80°	2307	2163	2019
85°	1437	1724	2012

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7596 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	749.3	4.7
10°-20°	2056.3	13.0
20°-30°	2846.9	18.0
30°-40°	3035.6	19.2
40°-50°	2769.3	17.5
50°-60°	2169.6	13.7
60°-70°	1414.0	8.9
70°-80°	626.5	4.0
80°-90°	134.5	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°	5652.5	35.8
0°-40°	8688.1	55.0
0°-60°	13627.0	86.2
0°-90°	15802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8049	8049	8049	8049	8049	
5°	7910	7900	7900	7891	7891	751
15°	7398	7398	7324	7249	7221	2080
25°	6412	6374	6272	6049	5881	2944
35°	5202	5165	4913	4541	4430	3252
45°	3992	3908	3573	3276	3145	3075
55°	2773	2689	2438	2150	2038	2487
65°	1647	1554	1405	1433	1191	1623
75°	661	614	577	549	605	708
85°	93	102	112	121	130	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8049.3	8049.3	8049.3	8049.3	8049.3
2.5°	7993.5	7993.5	7993.5	7984.2	7984.2
5°	7909.7	7900.4	7900.4	7891.1	7891.1
7.5°	7844.6	7835.3	7826.0	7816.7	7798.1
10°	7751.5	7751.5	7742.2	7695.7	7686.4
12.5°	7602.7	7593.4	7556.1	7491.0	7472.4
15°	7397.9	7397.9	7323.5	7249.0	7221.1
17.5°	7174.6	7165.3	7072.2	6997.8	6960.6
20°	6932.7	6914.0	6821.0	6700.0	6634.9
22.5°	6662.8	6662.8	6551.1	6392.9	6327.8
25°	6411.5	6374.3	6272.0	6048.6	5881.1
27.5°	6123.1	6067.2	5955.6	5639.2	5443.8
30°	5806.7	5778.8	5620.6	5211.1	5062.2
32.5°	5508.9	5462.4	5294.9	4866.8	4745.8
35°	5201.8	5164.6	4913.3	4541.1	4429.5
37.5°	4894.7	4848.2	4531.8	4234.0	4094.5
40°	4587.7	4531.8	4187.5	3917.6	3768.8
42.5°	4299.2	4224.7	3889.7	3601.3	3433.8
45°	3992.1	3908.3	3573.3	3275.6	3145.3
47.5°	3685.0	3610.6	3303.5	2996.4	2847.5
50°	3359.3	3294.2	3015.0	2707.9	2549.7
52.5°	3089.5	2987.1	2717.2	2410.1	2279.9
55°	2773.1	2689.3	2438.1	2149.6	2037.9
57.5°	2484.6	2400.8	2168.2	1898.3	1805.3
60°	2214.7	2093.8	1898.3	1665.7	1591.3
62.5°	1916.9	1823.9	1656.4	1461.0	1554.0
65°	1647.1	1554.0	1405.1	1433.1	1191.1
67.5°	1349.3	1302.8	1172.5	1042.2	1005.0
70°	1098.1	1042.2	995.7	856.1	818.9
72.5°	874.7	818.9	753.8	679.3	651.4
75°	660.7	614.2	576.9	549.0	604.9
77.5°	456.0	437.4	409.4	381.5	372.2
80°	297.8	288.5	279.2	269.9	260.6
82.5°	176.8	176.8	176.8	176.8	176.8
85°	93.1	102.4	111.7	121.0	130.3
87.5°	55.8	55.8	65.1	74.4	83.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)