

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: METALUX

Report Number: P843368

Luminaire Tested: 24CGSB-90-L935

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843368
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-90-L935
 Description: 2x4 CGSB AT 9000LM 3500K 90CRI
 Light Source: -
 Ballast/Driver: -

Summary

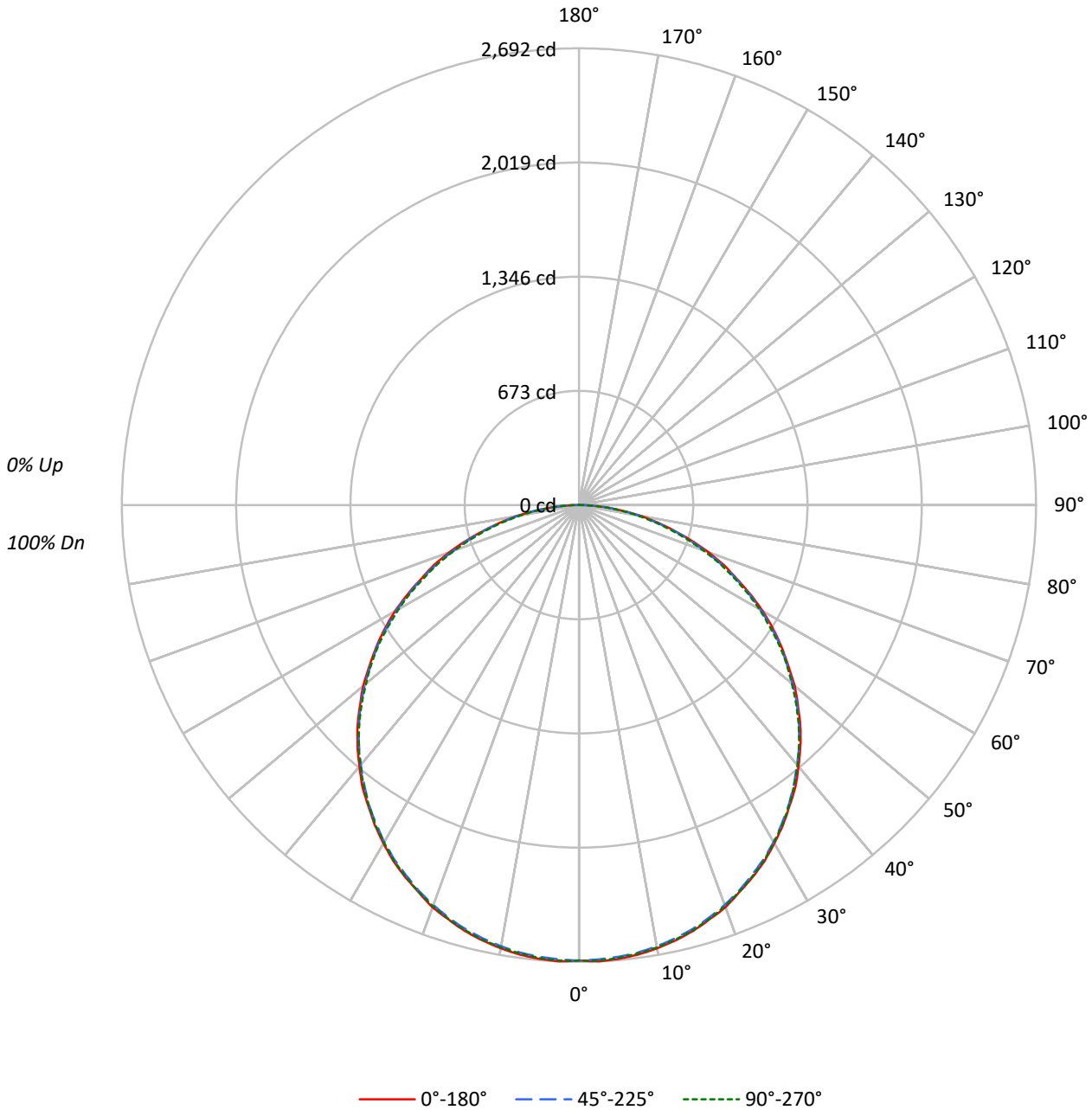
Lumens per Lamp: N/A
 Luminaire Lumens: 7942.5 lumens
 Efficiency: N/A
 Efficacy: 106.0 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

Input Watts (W): 74.9
 Input Voltage (V): 120
 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

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

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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	108	103	99	95	106	101	97	93	97	94	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3612	3612	3612
5°	3626	3609	3619
10°	3624	3608	3618
15°	3620	3603	3613
20°	3613	3591	3602
25°	3593	3575	3586
30°	3578	3562	3566
35°	3553	3541	3545
40°	3533	3512	3516
45°	3511	3488	3483
50°	3473	3442	3427
55°	3416	3398	3381
60°	3365	3326	3299
65°	3257	3233	3187
70°	3186	3100	3052
75°	3015	2977	2875
80°	2882	2787	2673
85°	2569	2532	2342

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3511 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.4	3.2
10°-20°	730.9	9.2
20°-30°	1112.3	14.0
30°-40°	1350.0	17.0
40°-50°	1413.9	17.8
50°-60°	1291.9	16.3
60°-70°	1004.0	12.6
70°-80°	602.1	7.6
80°-90°	183.1	2.3
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°	2097.5	26.4
0°-40°	3447.5	43.4
0°-60°	6153.2	77.5
0°-90°	7942.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7942.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2684	2684	2684	2684	2684	
5°	2684	2677	2672	2672	2680	255
15°	2599	2589	2587	2587	2594	733
25°	2420	2410	2408	2410	2415	1116
35°	2163	2158	2156	2156	2158	1355
45°	1845	1835	1833	1830	1830	1421
55°	1456	1451	1449	1436	1441	1302
65°	1023	1020	1016	1003	1001	1019
75°	580	578	573	563	553	617
85°	166	164	164	159	152	187
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2684.5	2684.5	2684.5	2684.5	2684.5
2.5°	2691.9	2682.1	2679.6	2679.6	2687.0
5°	2684.5	2677.2	2672.3	2672.3	2679.6
7.5°	2672.3	2662.5	2660.0	2660.0	2664.9
10°	2652.7	2645.4	2640.5	2640.5	2647.8
12.5°	2628.2	2618.4	2616.0	2618.4	2623.3
15°	2598.9	2589.1	2586.6	2586.6	2594.0
17.5°	2559.7	2552.4	2549.9	2549.9	2557.3
20°	2523.0	2510.8	2508.3	2510.8	2515.7
22.5°	2469.2	2464.3	2461.8	2464.3	2466.7
25°	2420.2	2410.4	2408.0	2410.4	2415.3
27.5°	2366.4	2356.6	2354.2	2354.2	2361.5
30°	2302.8	2295.4	2293.0	2293.0	2295.4
32.5°	2236.7	2231.8	2224.5	2226.9	2231.8
35°	2163.3	2158.4	2155.9	2155.9	2158.4
37.5°	2094.8	2085.0	2077.6	2077.6	2082.5
40°	2011.6	2006.7	1999.3	2001.8	2001.8
42.5°	1930.8	1923.5	1918.6	1916.1	1918.6
45°	1845.1	1835.4	1832.9	1830.5	1830.5
47.5°	1749.7	1749.7	1742.4	1737.5	1735.0
50°	1659.2	1649.4	1644.5	1637.1	1637.1
52.5°	1553.9	1551.5	1544.1	1541.7	1541.7
55°	1456.1	1451.2	1448.7	1436.5	1441.4
57.5°	1355.7	1345.9	1343.5	1336.1	1331.2
60°	1250.5	1245.6	1235.8	1226.0	1226.0
62.5°	1137.9	1135.5	1125.7	1118.3	1115.9
65°	1022.9	1020.5	1015.6	1003.3	1000.9
67.5°	925.0	915.2	903.0	893.2	893.2
70°	810.0	797.8	788.0	778.2	775.7
72.5°	692.5	685.2	680.3	670.5	663.2
75°	580.0	577.5	572.6	562.8	553.1
77.5°	474.7	472.3	460.1	452.7	445.4
80°	372.0	362.2	359.7	349.9	345.0
82.5°	261.8	266.7	254.5	252.1	249.6
85°	166.4	164.0	164.0	159.1	151.7
87.5°	73.4	75.9	75.9	75.9	75.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)