

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: P843369

Luminaire Tested: 24CGSB-90-L940

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843369
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-90-L940
 Description: 2x4 CGSB AT 9000LM 4000K 90CRI
 Light Source: -
 Ballast/Driver: -

Summary

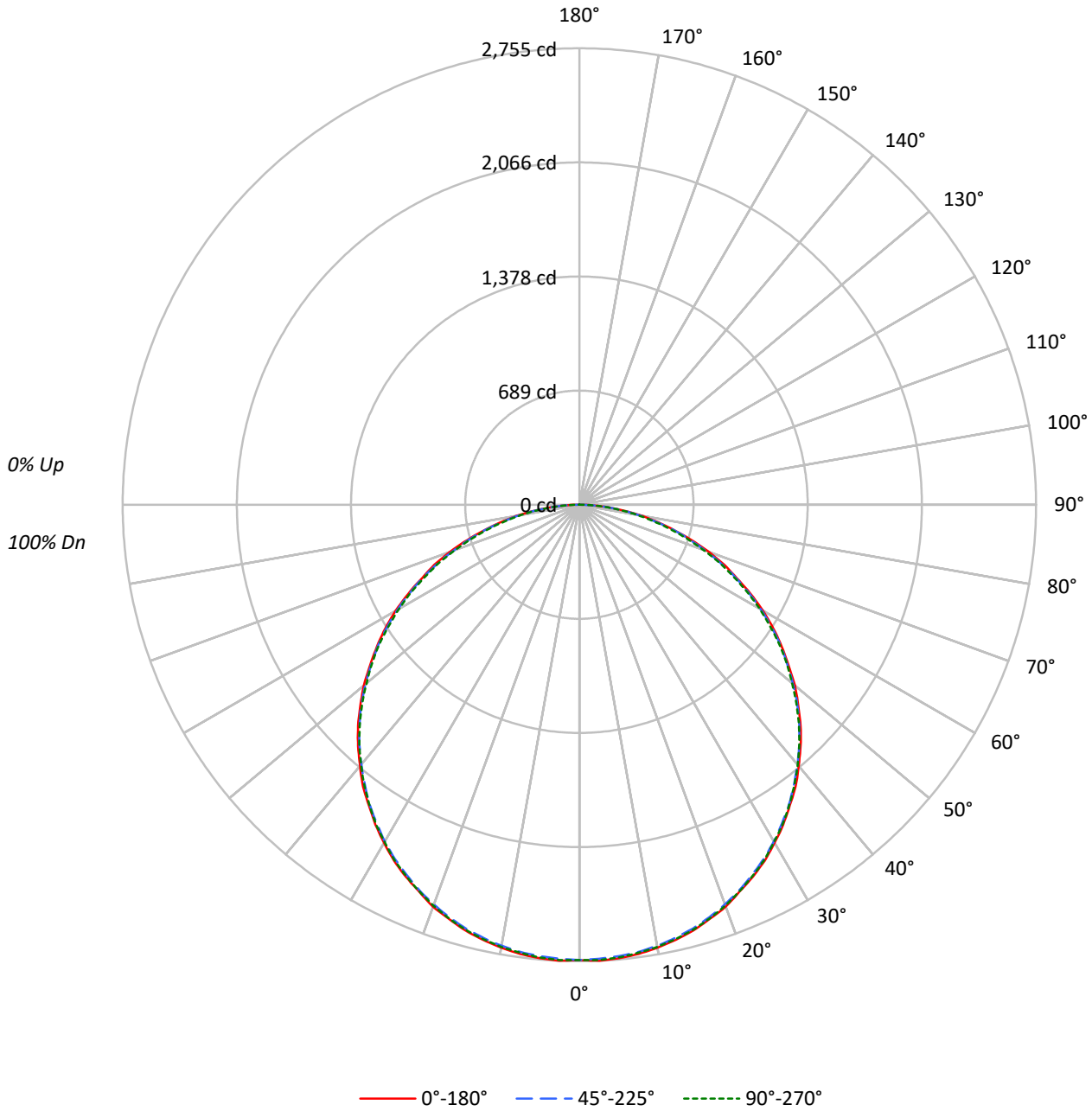
Lumens per Lamp: N/A
 Luminaire Lumens: 8129.4 lumens
 Efficiency: N/A
 Efficacy: 108.5 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

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°	3697	3697	3697
5°	3711	3694	3704
10°	3709	3692	3703
15°	3705	3688	3698
20°	3698	3676	3687
25°	3678	3659	3670
30°	3662	3646	3650
35°	3637	3625	3629
40°	3616	3594	3599
45°	3594	3570	3565
50°	3555	3523	3508
55°	3496	3478	3461
60°	3444	3404	3377
65°	3333	3309	3261
70°	3262	3173	3124
75°	3086	3047	2943
80°	2950	2853	2737
85°	2629	2590	2397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3594 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.4	3.2
10°-20°	748.1	9.2
20°-30°	1138.4	14.0
30°-40°	1381.7	17.0
40°-50°	1447.1	17.8
50°-60°	1322.3	16.3
60°-70°	1027.7	12.6
70°-80°	616.3	7.6
80°-90°	187.4	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°	2146.9	26.4
0°-40°	3528.6	43.4
0°-60°	6298.0	77.5
0°-90°	8129.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8129.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2748	2748	2748	2748	2748	
5°	2748	2740	2735	2735	2743	261
15°	2660	2650	2648	2648	2655	751
25°	2477	2467	2465	2467	2472	1142
35°	2214	2209	2207	2207	2209	1387
45°	1889	1878	1876	1874	1874	1455
55°	1490	1485	1483	1470	1475	1333
65°	1047	1044	1040	1027	1024	1043
75°	594	591	586	576	566	631
85°	170	168	168	163	155	191
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2747.7	2747.7	2747.7	2747.7	2747.7
2.5°	2755.2	2745.2	2742.7	2742.7	2750.2
5°	2747.7	2740.2	2735.2	2735.2	2742.7
7.5°	2735.2	2725.1	2722.6	2722.6	2727.6
10°	2715.1	2707.6	2702.6	2702.6	2710.1
12.5°	2690.1	2680.1	2677.6	2680.1	2685.1
15°	2660.0	2650.0	2647.5	2647.5	2655.0
17.5°	2619.9	2612.4	2609.9	2609.9	2617.4
20°	2582.4	2569.8	2567.3	2569.8	2574.9
22.5°	2527.3	2522.3	2519.8	2522.3	2524.8
25°	2477.2	2467.2	2464.7	2467.2	2472.2
27.5°	2422.1	2412.1	2409.5	2409.5	2417.1
30°	2356.9	2349.4	2346.9	2346.9	2349.4
32.5°	2289.3	2284.3	2276.8	2279.3	2284.3
35°	2214.2	2209.2	2206.7	2206.7	2209.2
37.5°	2144.0	2134.0	2126.5	2126.5	2131.5
40°	2058.9	2053.9	2046.4	2048.9	2048.9
42.5°	1976.2	1968.7	1963.7	1961.2	1963.7
45°	1888.6	1878.5	1876.0	1873.5	1873.5
47.5°	1790.9	1790.9	1783.4	1778.4	1775.9
50°	1698.2	1688.2	1683.2	1675.7	1675.7
52.5°	1590.5	1588.0	1580.5	1578.0	1578.0
55°	1490.3	1485.3	1482.8	1470.3	1475.3
57.5°	1387.6	1377.6	1375.1	1367.6	1362.6
60°	1279.9	1274.9	1264.9	1254.9	1254.9
62.5°	1164.7	1162.2	1152.2	1144.7	1142.2
65°	1047.0	1044.5	1039.5	1026.9	1024.4
67.5°	946.8	936.8	924.2	914.2	914.2
70°	829.1	816.5	806.5	796.5	794.0
72.5°	708.8	701.3	696.3	686.3	678.8
75°	593.6	591.1	586.1	576.1	566.1
77.5°	485.9	483.4	470.9	463.4	455.9
80°	380.7	370.7	368.2	358.2	353.2
82.5°	268.0	273.0	260.5	258.0	255.5
85°	170.3	167.8	167.8	162.8	155.3
87.5°	75.1	77.6	77.6	77.6	77.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)