

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: P843364

Luminaire Tested: 24CGSB-90-L835

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843364
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-90-L835
 Description: 2x4 CGSB AT 9000LM 3500K 80CRI
 Light Source: -
 Ballast/Driver: -

Summary

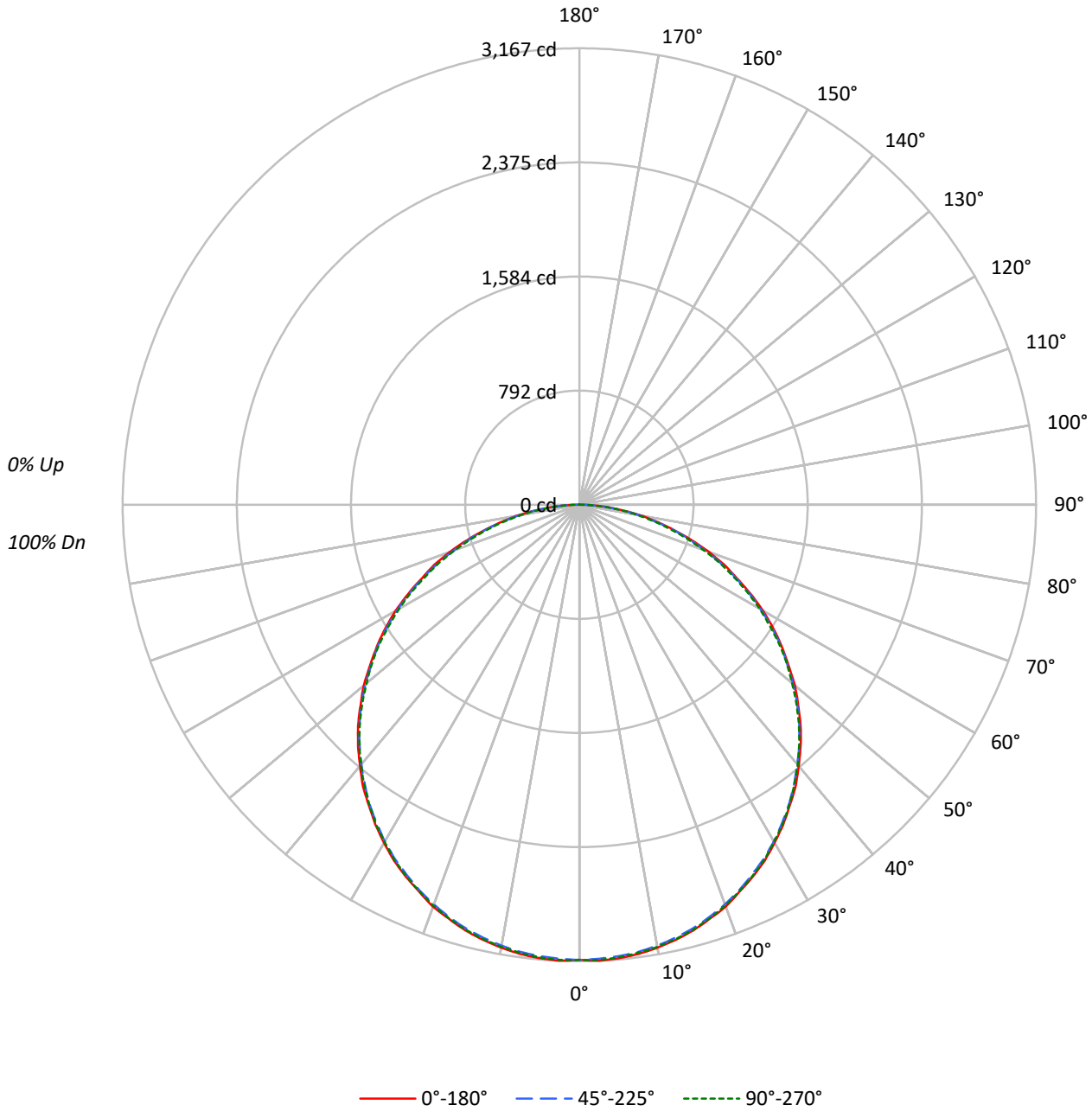
Lumens per Lamp: N/A
 Luminaire Lumens: 9344.1 lumens
 Efficiency: N/A
 Efficacy: 124.8 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

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°	4249	4249	4249
5°	4266	4246	4258
10°	4264	4244	4256
15°	4259	4239	4251
20°	4250	4225	4238
25°	4227	4206	4219
30°	4209	4191	4196
35°	4180	4166	4171
40°	4157	4131	4136
45°	4131	4103	4098
50°	4086	4050	4032
55°	4018	3998	3978
60°	3959	3912	3881
65°	3831	3804	3749
70°	3749	3647	3590
75°	3547	3502	3383
80°	3391	3279	3145
85°	3023	2978	2756

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4131 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.3	3.2
10°-20°	859.8	9.2
20°-30°	1308.5	14.0
30°-40°	1588.2	17.0
40°-50°	1663.4	17.8
50°-60°	1519.9	16.3
60°-70°	1181.2	12.6
70°-80°	708.4	7.6
80°-90°	215.4	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°	2467.7	26.4
0°-40°	4055.9	43.4
0°-60°	7239.1	77.5
0°-90°	9344.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9344.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3158	3158	3158	3158	3158	
5°	3158	3150	3144	3144	3152	300
15°	3058	3046	3043	3043	3052	863
25°	2847	2836	2833	2836	2842	1313
35°	2545	2539	2536	2536	2539	1594
45°	2171	2159	2156	2154	2154	1672
55°	1713	1707	1704	1690	1696	1532
65°	1203	1200	1195	1180	1178	1198
75°	682	679	674	662	651	726
85°	196	193	193	187	178	220
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3158.3	3158.3	3158.3	3158.3	3158.3
2.5°	3166.9	3155.4	3152.5	3152.5	3161.1
5°	3158.3	3149.6	3143.9	3143.9	3152.5
7.5°	3143.9	3132.3	3129.5	3129.5	3135.2
10°	3120.8	3112.2	3106.4	3106.4	3115.1
12.5°	3092.0	3080.5	3077.6	3080.5	3086.3
15°	3057.5	3046.0	3043.1	3043.1	3051.7
17.5°	3011.4	3002.8	2999.9	2999.9	3008.5
20°	2968.2	2953.8	2951.0	2953.8	2959.6
22.5°	2904.9	2899.1	2896.3	2899.1	2902.0
25°	2847.3	2835.8	2832.9	2835.8	2841.6
27.5°	2784.0	2772.5	2769.6	2769.6	2778.2
30°	2709.1	2700.5	2697.6	2697.6	2700.5
32.5°	2631.4	2625.6	2617.0	2619.9	2625.6
35°	2545.0	2539.3	2536.4	2536.4	2539.3
37.5°	2464.4	2452.9	2444.3	2444.3	2450.0
40°	2366.5	2360.8	2352.1	2355.0	2355.0
42.5°	2271.5	2262.9	2257.1	2254.3	2257.1
45°	2170.8	2159.2	2156.4	2153.5	2153.5
47.5°	2058.5	2058.5	2049.8	2044.1	2041.2
50°	1952.0	1940.4	1934.7	1926.0	1926.0
52.5°	1828.2	1825.3	1816.6	1813.8	1813.8
55°	1713.0	1707.2	1704.4	1690.0	1695.7
57.5°	1595.0	1583.4	1580.6	1571.9	1566.2
60°	1471.2	1465.4	1453.9	1442.4	1442.4
62.5°	1338.7	1335.9	1324.3	1315.7	1312.8
65°	1203.4	1200.5	1194.8	1180.4	1177.5
67.5°	1088.3	1076.7	1062.3	1050.8	1050.8
70°	952.9	938.6	927.0	915.5	912.6
72.5°	814.8	806.1	800.4	788.8	780.2
75°	682.3	679.4	673.7	662.2	650.7
77.5°	558.5	555.6	541.3	532.6	524.0
80°	437.6	426.1	423.2	411.7	405.9
82.5°	308.1	313.8	299.4	296.5	293.7
85°	195.8	192.9	192.9	187.1	178.5
87.5°	86.4	89.2	89.2	89.2	89.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)