

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: P843316

Luminaire Tested: 24CGSB-45-L835

Issue Date: 5/31/2024

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

Test Information

Test Method: LM-79-2019
 Report Number: P843316
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-45-L835
 Description: 2x4 CGSB AT 4500LM 3500K 80CRI
 Light Source: -
 Ballast/Driver: -

Summary

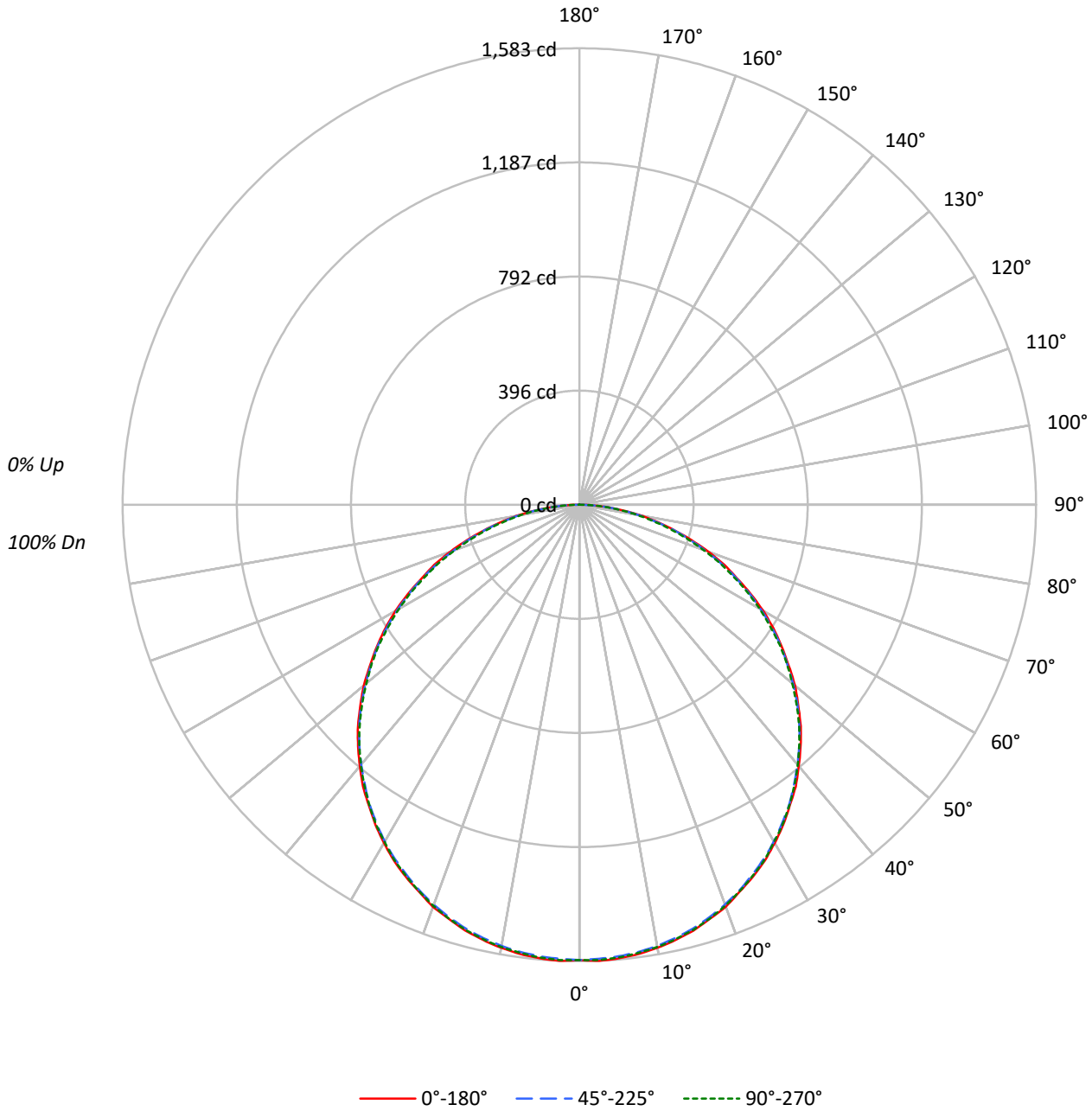
Lumens per Lamp: N/A
 Luminaire Lumens: 4672.1 lumens
 Efficiency: N/A
 Efficacy: 132.0 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

Input Watts (W): 35.4
 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

TEST NUMBER: P843316
CATALOG NUMBER: 24CGSB-45-L835

Luminous Intensity Polar Plot



TEST NUMBER: P843316
 CATALOG NUMBER: 24CGSB-45-L835

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°	2125	2125	2125
5°	2133	2123	2129
10°	2132	2122	2128
15°	2129	2119	2126
20°	2125	2113	2119
25°	2114	2103	2109
30°	2105	2096	2098
35°	2090	2083	2085
40°	2078	2066	2068
45°	2065	2052	2049
50°	2043	2025	2016
55°	2009	1999	1989
60°	1979	1956	1941
65°	1916	1902	1875
70°	1875	1823	1795
75°	1774	1751	1691
80°	1695	1640	1573
85°	1511	1488	1377

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2065 cd/sqm

TEST NUMBER: P843316
 CATALOG NUMBER: 24CGSB-45-L835

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.6	3.2
10°-20°	429.9	9.2
20°-30°	654.3	14.0
30°-40°	794.1	17.0
40°-50°	831.7	17.8
50°-60°	759.9	16.3
60°-70°	590.6	12.6
70°-80°	354.2	7.6
80°-90°	107.7	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°	1233.8	26.4
0°-40°	2027.9	43.4
0°-60°	3619.5	77.5
0°-90°	4672.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4672.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1579	1575	1572	1572	1576	150
15°	1529	1523	1522	1522	1526	431
25°	1424	1418	1416	1418	1421	656
35°	1272	1270	1268	1268	1270	797
45°	1085	1080	1078	1077	1077	836
55°	856	854	852	845	848	766
65°	602	600	597	590	589	599
75°	341	340	337	331	325	363
85°	98	96	96	94	89	110
90°	0	0	0	0	0	

TEST NUMBER: P843316

CATALOG NUMBER: 24CGSB-45-L835

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1579.1	1579.1	1579.1	1579.1	1579.1
2.5°	1583.4	1577.7	1576.2	1576.2	1580.6
5°	1579.1	1574.8	1571.9	1571.9	1576.2
7.5°	1571.9	1566.2	1564.7	1564.7	1567.6
10°	1560.4	1556.1	1553.2	1553.2	1557.5
12.5°	1546.0	1540.3	1538.8	1540.3	1543.1
15°	1528.7	1523.0	1521.5	1521.5	1525.9
17.5°	1505.7	1501.4	1500.0	1500.0	1504.3
20°	1484.1	1476.9	1475.5	1476.9	1479.8
22.5°	1452.5	1449.6	1448.1	1449.6	1451.0
25°	1423.7	1417.9	1416.5	1417.9	1420.8
27.5°	1392.0	1386.2	1384.8	1384.8	1389.1
30°	1354.6	1350.2	1348.8	1348.8	1350.2
32.5°	1315.7	1312.8	1308.5	1309.9	1312.8
35°	1272.5	1269.6	1268.2	1268.2	1269.6
37.5°	1232.2	1226.5	1222.1	1222.1	1225.0
40°	1183.3	1180.4	1176.1	1177.5	1177.5
42.5°	1135.8	1131.4	1128.6	1127.1	1128.6
45°	1085.4	1079.6	1078.2	1076.7	1076.7
47.5°	1029.2	1029.2	1024.9	1022.0	1020.6
50°	976.0	970.2	967.3	963.0	963.0
52.5°	914.1	912.6	908.3	906.9	906.9
55°	856.5	853.6	852.2	845.0	847.9
57.5°	797.5	791.7	790.3	786.0	783.1
60°	735.6	732.7	726.9	721.2	721.2
62.5°	669.4	667.9	662.2	657.9	656.4
65°	601.7	600.3	597.4	590.2	588.8
67.5°	544.1	538.4	531.2	525.4	525.4
70°	476.5	469.3	463.5	457.8	456.3
72.5°	407.4	403.1	400.2	394.4	390.1
75°	341.2	339.7	336.8	331.1	325.3
77.5°	279.3	277.8	270.6	266.3	262.0
80°	218.8	213.0	211.6	205.8	203.0
82.5°	154.0	156.9	149.7	148.3	146.8
85°	97.9	96.4	96.4	93.6	89.2
87.5°	43.2	44.6	44.6	44.6	44.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)