

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P#

Luminaire Tested: **4ILED-LD5-14-W-ASY-UNV-L840-CD2-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34179)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4ILED-LD5-14-W-ASY-UNV-L840-CD2-U
Description: Metalux 4' ILED WITH ASYMMETRIC DIRECTIONAL LOUVER DISTRIBUTION

Light Source: (1) 4000 CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

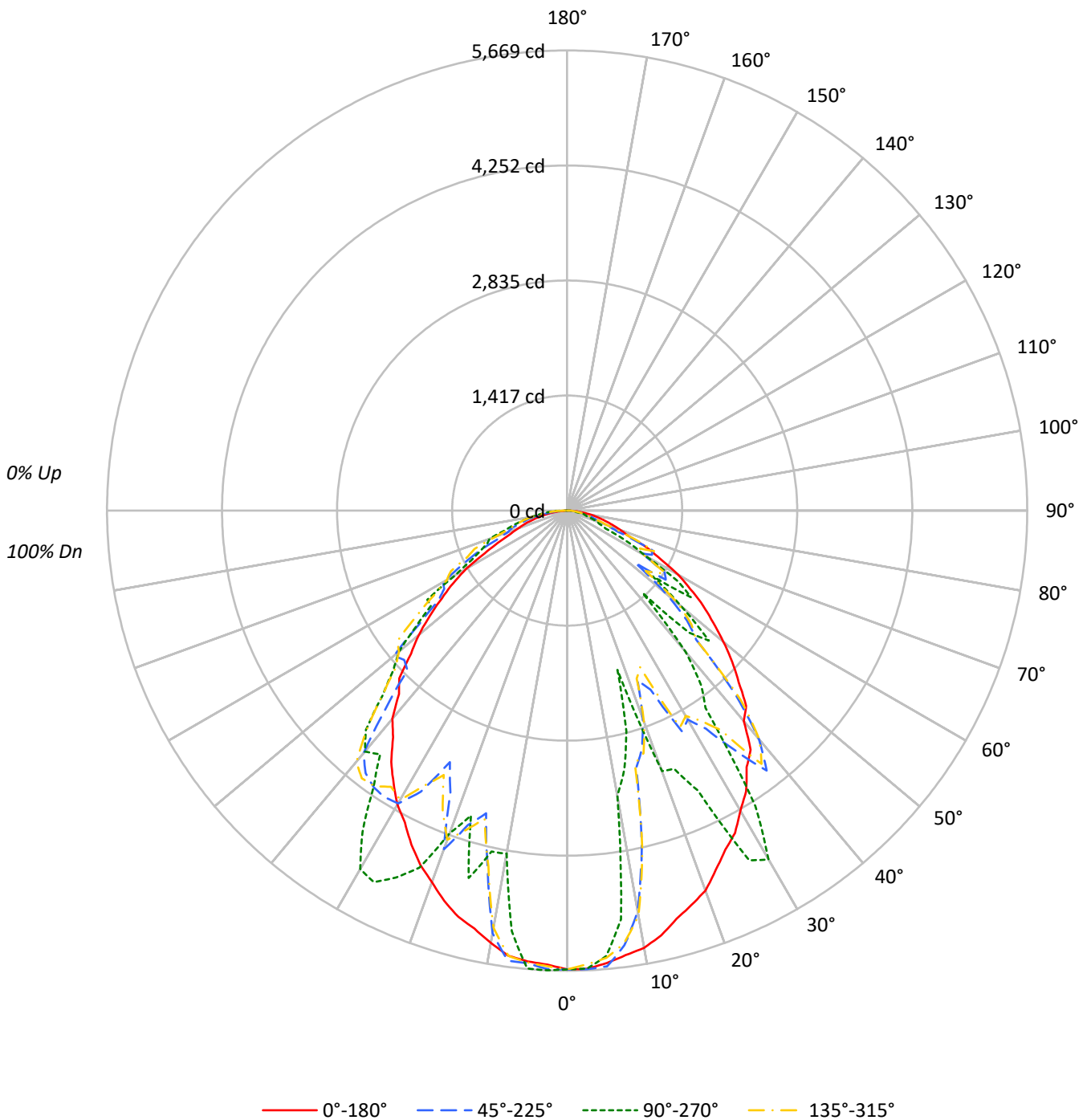
Lumens per Lamp: N/A
Luminaire Lumens: 11130.0 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.25 / 1.27
Luminous Opening: Rectangular w/ Sides (W: 0.92' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 102
Input Voltage (V):
Input Current (A_{in}): 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: 25 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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73					73			
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	16591	16591	16591	16591
5°	16454	16087	16392	16525
10°	16230	10436	16053	12553
15°	15719	8313	15638	13840
20°	15422	10264	15076	12700
25°	14760	11728	14532	15372
30°	14259	15824	13976	16260
35°	13585	9886	13307	13835
40°	12699	7957	12569	13609
45°	12105	7958	11840	12023
50°	11136	7409	10590	10927
55°	10115	8246	9316	9073
60°	8875	5420	8063	7835
65°	7173	2949	6221	6623
70°	5599	2581	5166	6702
75°	4955	1910	4535	5463
80°	4448	1327	3736	4465
85°	3733	982	2421	3667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.3	4.6
10°-20°	1194.5	10.7
20°-30°	1777.9	16.0
30°-40°	2242.3	20.1
40°-50°	2030.8	18.2
50°-60°	1688.5	15.2
60°-70°	1020.1	9.2
70°-80°	505.9	4.5
80°-90°	155.7	1.4
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°	3486.7	31.3
0°-40°	5729.0	51.5
0°-60°	9448.3	84.9
0°-90°	11130.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11130.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5652	5652	5652	5652	5652	
5°	5596	5511	5575	5661	5596	530
15°	5207	2815	5180	4687	5207	1473
25°	4610	3805	4539	4987	4610	2132
35°	3857	2969	3778	4156	3857	2423
45°	2989	2126	2923	3212	2989	2305
55°	2047	1862	1885	2049	2047	1822
65°	1088	524	944	1177	1088	1069
75°	478	237	437	678	478	512
85°	142	66	92	245	142	158
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7
2.5°	5649.8	5682.5	5655.5	5649.8	5647.8	5653.6	5595.8	5578.5	5597.8	5655.5	5653.6
5°	5595.8	5644.0	5636.3	5555.4	5511.1	5559.3	5532.3	5536.1	5574.7	5615.1	5595.8
7.5°	5524.6	5584.3	5403.3	5174.1	5079.8	5199.2	5376.3	5515.0	5532.3	5597.8	5593.9
10°	5468.8	5522.7	5010.5	4230.6	3568.2	4091.9	5064.4	5403.3	5409.1	5499.6	5287.7
12.5°	5359.0	5282.0	4253.7	3315.9	3260.1	3348.6	4282.6	5154.9	5276.2	5337.8	4521.3
15°	5206.9	4977.7	3285.1	2898.1	2815.3	2909.6	3227.3	4939.2	5179.9	5237.7	3860.9
17.5°	5093.3	4660.0	3067.5	2566.8	2058.5	2449.4	3133.0	4756.3	5041.3	4948.8	4063.1
20°	4981.6	4340.3	2724.7	2792.1	3416.0	2778.7	2767.1	4402.0	4869.9	4319.2	4440.5
22.5°	4789.0	3656.7	2258.7	3329.4	3443.0	3296.7	2241.4	3780.0	4725.5	3899.4	3756.9
25°	4609.9	3030.9	2434.0	3456.5	3805.0	3408.3	2125.9	2996.3	4538.7	3487.3	3418.0
27.5°	4477.1	2859.5	3063.7	3974.5	4858.3	3701.0	3009.7	2767.1	4330.7	3298.6	3905.2
30°	4267.2	2620.8	2973.2	4852.6	4962.3	4765.9	2921.2	2661.2	4182.4	3491.1	4165.1
32.5°	4101.6	2328.1	3186.9	4577.2	4317.2	4554.1	3067.5	2482.1	3980.3	3674.1	4186.3
35°	3857.0	2206.8	3606.7	4003.4	2969.3	3876.3	3300.5	2279.9	3778.1	3394.9	4157.4
37.5°	3712.6	1815.9	4038.0	2715.1	2713.2	2719.0	3934.0	2010.3	3520.0	2882.6	4078.5
40°	3383.3	1964.1	3677.9	2482.1	2266.5	2534.1	3687.6	1640.6	3348.6	2547.6	3901.3
42.5°	3263.9	2204.8	3061.7	2039.2	1374.9	2164.4	3171.5	2079.7	3067.5	2661.2	3310.1
45°	2988.6	2147.1	2251.0	1290.2	2125.9	1376.8	2241.4	2056.6	2923.1	2805.6	2782.5
47.5°	2757.5	2014.2	2004.6	1981.5	2368.5	1923.7	2077.7	1931.4	2609.2	2728.6	2722.8
50°	2511.0	2083.5	1598.3	2083.5	1833.2	2112.4	1777.3	1817.8	2387.8	2559.1	2780.6
52.5°	2266.5	2179.8	1049.5	1557.8	1328.7	1611.7	1220.8	1794.7	2133.6	2405.1	2297.3
55°	2046.9	2166.3	1482.7	1338.3	1862.1	1274.8	1338.3	1989.2	1885.2	2164.4	1935.2
57.5°	1800.5	1829.3	1426.9	1632.9	1611.7	1713.8	1434.6	1763.9	1665.7	1925.6	1796.6
60°	1577.1	1361.4	1049.5	1276.7	1097.6	1419.2	1068.7	1453.8	1432.7	1513.5	1763.9
62.5°	1292.1	1101.5	1178.5	933.9	860.8	920.4	1010.9	1053.3	1145.7	1282.5	1463.5
65°	1088.0	870.4	1161.1	595.0	523.8	697.1	1182.3	930.1	943.6	1161.1	1218.9
67.5°	814.5	641.2	666.3	477.6	431.3	467.9	831.9	720.2	756.8	858.8	939.7
70°	697.1	570.0	483.3	392.8	390.9	394.8	521.8	537.2	643.2	724.0	777.9
72.5°	581.5	469.9	385.1	323.5	292.7	356.2	381.3	442.9	544.9	860.8	710.6
75°	477.6	543.0	311.9	265.7	236.9	260.0	306.2	402.5	437.1	535.3	581.5
77.5°	385.1	315.8	244.6	221.4	211.8	229.1	236.9	419.8	342.8	414.0	491.0
80°	300.4	234.9	190.6	148.3	127.1	144.4	188.7	213.7	252.3	308.1	365.9
82.5°	215.7	179.1	132.9	107.8	92.4	105.9	125.2	150.2	171.4	211.8	256.1
85°	142.5	117.5	94.4	77.0	65.5	75.1	84.7	94.4	92.4	127.1	163.7
87.5°	71.2	63.5	63.5	55.8	46.2	52.0	57.8	50.1	27.0	55.8	100.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	5651.7	5651.7	5651.7	5651.7	5651.7	5651.7
2.5°	5653.6	5669.0	5665.2	5617.0	5620.9	5649.8
5°	5613.2	5661.3	5649.8	5588.1	5584.3	5595.8
7.5°	5418.7	5226.1	5509.2	5534.2	5513.0	5524.6
10°	4421.2	4292.2	4619.6	5220.3	5470.7	5468.8
12.5°	3968.7	4303.8	4034.2	4488.6	5351.3	5359.0
15°	4525.2	4687.0	4588.7	3928.3	5216.5	5206.9
17.5°	4236.4	3939.8	4274.9	4120.8	5045.1	5093.3
20°	3778.1	4226.7	3822.4	4313.4	4444.3	4981.6
22.5°	4584.9	4762.1	4405.8	4003.4	4022.6	4789.0
25°	4698.5	4987.3	4609.9	3595.1	3664.4	4609.9
27.5°	4831.4	5160.7	4802.5	3820.4	3448.8	4477.1
30°	4887.2	5099.0	4975.8	4113.1	3516.2	4267.2
32.5°	4779.4	4694.7	4889.1	4036.1	3470.0	4101.6
35°	4219.0	4155.5	4452.0	4142.0	3427.6	3857.0
37.5°	3579.7	3783.8	3909.0	4157.4	3127.2	3712.6
40°	3525.8	3876.3	3610.5	4036.1	2863.4	3383.3
42.5°	3608.6	3668.3	3537.4	3652.9	2645.8	3263.9
45°	3210.0	3211.9	3423.7	3215.8	2668.9	2988.6
47.5°	2794.1	2901.9	3000.1	2865.3	2649.6	2757.5
50°	2453.2	2703.6	2690.1	2705.5	2468.6	2511.0
52.5°	2453.2	2349.3	2376.2	2632.3	2355.0	2266.5
55°	2087.4	2048.9	2224.1	2266.5	2262.6	2046.9
57.5°	1852.4	2043.1	1914.1	1950.7	2033.5	1800.5
60°	1644.5	1586.7	1833.2	1709.9	1802.4	1577.1
62.5°	1284.4	1334.5	1421.1	1615.6	1505.8	1292.1
65°	1099.5	1176.6	1230.5	1351.8	1218.9	1088.0
67.5°	1036.0	1068.7	1053.3	1238.2	1047.5	814.5
70°	910.8	1014.8	945.5	928.1	864.6	697.1
72.5°	758.7	791.4	864.6	739.4	668.2	581.5
75°	647.0	677.8	683.6	639.3	656.6	477.6
77.5°	514.1	546.9	543.0	544.9	543.0	385.1
80°	404.4	427.5	427.5	417.9	365.9	300.4
82.5°	304.2	327.4	333.1	302.3	271.5	215.7
85°	217.6	244.6	242.6	215.7	179.1	142.5
87.5°	140.6	171.4	175.2	138.6	105.9	71.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)