

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-LD5-11-W-ASY-UNV-L840-CD1-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-LD5-11-W-ASY-UNV-L840-CD1-U
Description: Metalux 4' ILED WITH ASYMMETRIC DIRECTIONAL LOUVER DISTRIBUTION

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

Summary

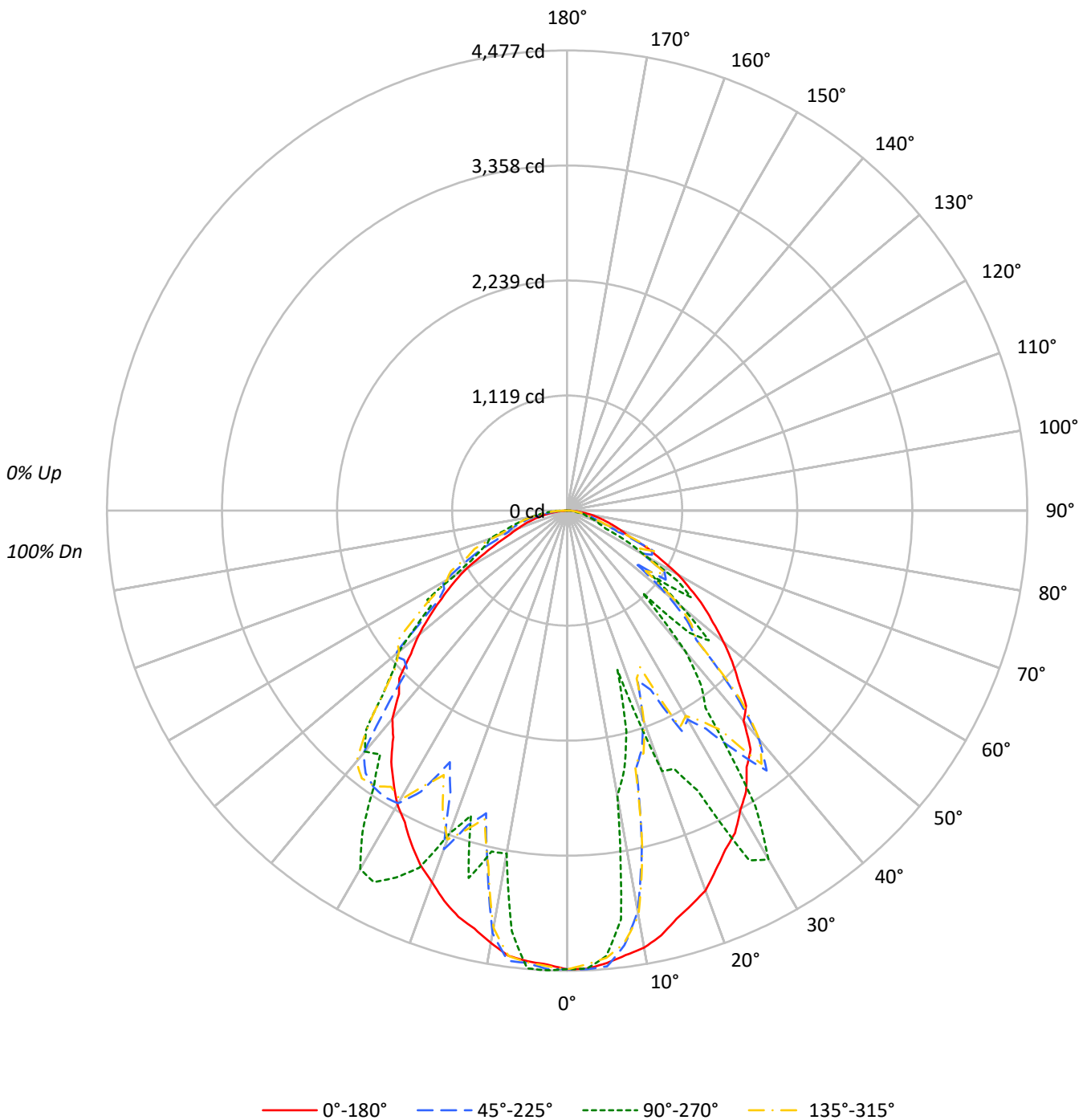
Lumens per Lamp: N/A
Luminaire Lumens: 8789.0 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.25 / 1.27
Luminous Opening: Rectangular w/ Sides (W: 0.92' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 83.9
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°	13102	13102	13102	13102
5°	12993	12703	12944	13050
10°	12817	8241	12677	9913
15°	12413	6564	12349	10929
20°	12178	8105	11905	10029
25°	11655	9261	11475	12139
30°	11260	12496	11036	12840
35°	10728	7807	10508	10925
40°	10028	6283	9925	10747
45°	9559	6284	9349	9494
50°	8794	5851	8362	8628
55°	7988	6511	7357	7164
60°	7009	4280	6366	6188
65°	5664	2328	4912	5230
70°	4421	2039	4079	5292
75°	3912	1507	3581	4315
80°	3512	1049	2949	3526
85°	2947	775	1912	2895



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.1	4.6
10°-20°	943.2	10.7
20°-30°	1404.0	16.0
30°-40°	1770.7	20.1
40°-50°	1603.7	18.2
50°-60°	1333.3	15.2
60°-70°	805.5	9.2
70°-80°	399.5	4.5
80°-90°	123.0	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°	2753.3	31.3
0°-40°	4524.0	51.5
0°-60°	7461.0	84.9
0°-90°	8789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8789.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4463	4463	4463	4463	4463	
5°	4419	4352	4402	4471	4419	418
15°	4112	2223	4090	3701	4112	1163
25°	3640	3005	3584	3938	3640	1683
35°	3046	2345	2983	3281	3046	1914
45°	2360	1679	2308	2536	2360	1820
55°	1616	1470	1489	1618	1616	1439
65°	859	414	745	929	859	844
75°	377	187	345	535	377	405
85°	112	52	73	193	112	125
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°	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0
2.5°	4461.4	4487.3	4466.0	4461.4	4459.9	4464.5	4418.9	4405.2	4420.4	4466.0	4464.5
5°	4418.9	4456.9	4450.8	4386.9	4352.0	4390.0	4368.7	4371.7	4402.1	4434.1	4418.9
7.5°	4362.6	4409.7	4266.8	4085.8	4011.3	4105.6	4245.5	4355.0	4368.7	4420.4	4417.3
10°	4318.5	4361.1	3956.6	3340.8	2817.7	3231.3	3999.2	4266.8	4271.4	4342.8	4175.6
12.5°	4231.8	4171.0	3359.0	2618.5	2574.4	2644.3	3381.8	4070.6	4166.4	4215.1	3570.4
15°	4111.7	3930.7	2594.1	2288.5	2223.1	2297.6	2548.5	3900.3	4090.4	4136.0	3048.8
17.5°	4022.0	3679.8	2422.3	2027.0	1625.5	1934.2	2474.0	3755.9	3980.9	3907.9	3208.5
20°	3933.8	3427.4	2151.6	2204.9	2697.5	2194.2	2185.1	3476.1	3845.6	3410.7	3506.5
22.5°	3781.7	2887.6	1783.7	2629.1	2718.8	2603.3	1770.0	2984.9	3731.5	3079.2	2966.7
25°	3640.3	2393.4	1922.0	2729.5	3004.7	2691.5	1678.7	2366.0	3584.0	2753.8	2699.1
27.5°	3535.4	2258.1	2419.3	3138.5	3836.5	2922.6	2376.7	2185.1	3419.8	2604.8	3083.8
30°	3369.6	2069.5	2347.8	3831.9	3918.6	3763.5	2306.7	2101.5	3302.7	2756.8	3289.1
32.5°	3238.9	1838.4	2516.6	3614.5	3409.2	3596.2	2422.3	1960.1	3143.1	2901.3	3305.8
35°	3045.8	1742.6	2848.1	3161.3	2344.8	3061.0	2606.3	1800.4	2983.4	2680.8	3283.0
37.5°	2931.7	1433.9	3188.7	2144.0	2142.5	2147.1	3106.6	1587.5	2779.7	2276.3	3220.6
40°	2671.7	1551.0	2904.3	1960.1	1789.7	2001.1	2911.9	1295.5	2644.3	2011.8	3080.7
42.5°	2577.4	1741.1	2417.8	1610.3	1085.7	1709.2	2504.4	1642.2	2422.3	2101.5	2613.9
45°	2360.0	1695.5	1777.6	1018.8	1678.7	1087.2	1770.0	1624.0	2308.3	2215.5	2197.3
47.5°	2177.5	1590.5	1582.9	1564.7	1870.3	1519.1	1640.7	1525.2	2060.4	2154.7	2150.1
50°	1982.9	1645.3	1262.1	1645.3	1447.6	1668.1	1403.5	1435.4	1885.5	2020.9	2195.7
52.5°	1789.7	1721.3	828.7	1230.2	1049.2	1272.7	964.1	1417.2	1684.8	1899.2	1814.1
55°	1616.4	1710.7	1170.9	1056.8	1470.4	1006.6	1056.8	1570.8	1488.7	1709.2	1528.2
57.5°	1421.8	1444.6	1126.8	1289.5	1272.7	1353.3	1132.8	1392.9	1315.3	1520.6	1418.7
60°	1245.4	1075.1	828.7	1008.2	866.7	1120.7	843.9	1148.1	1131.3	1195.2	1392.9
62.5°	1020.3	869.8	930.6	737.5	679.7	726.8	798.3	831.8	904.8	1012.7	1155.7
65°	859.1	687.3	916.9	469.9	413.6	550.5	933.6	734.4	745.1	916.9	962.5
67.5°	643.2	506.4	526.1	377.1	340.6	369.5	656.9	568.7	597.6	678.2	742.1
70°	550.5	450.1	381.7	310.2	308.7	311.7	412.1	424.2	507.9	571.7	614.3
72.5°	459.2	371.0	304.1	255.5	231.1	281.3	301.1	349.7	430.3	679.7	561.1
75°	377.1	428.8	246.3	209.8	187.0	205.3	241.8	317.8	345.2	422.7	459.2
77.5°	304.1	249.4	193.1	174.9	167.3	181.0	187.0	331.5	270.7	326.9	387.8
80°	237.2	185.5	150.5	117.1	100.4	114.0	149.0	168.8	199.2	243.3	288.9
82.5°	170.3	141.4	104.9	85.2	73.0	83.6	98.8	118.6	135.3	167.3	202.2
85°	112.5	92.8	74.5	60.8	51.7	59.3	66.9	74.5	73.0	100.4	129.3
87.5°	56.3	50.2	50.2	44.1	36.5	41.1	45.6	39.5	21.3	44.1	79.1
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°	4463.0	4463.0	4463.0	4463.0	4463.0	4463.0
2.5°	4464.5	4476.6	4473.6	4435.6	4438.6	4461.4
5°	4432.5	4470.6	4461.4	4412.8	4409.7	4418.9
7.5°	4279.0	4126.9	4350.4	4370.2	4353.5	4362.6
10°	3491.3	3389.4	3647.9	4122.3	4320.0	4318.5
12.5°	3134.0	3398.5	3185.7	3544.5	4225.7	4231.8
15°	3573.4	3701.1	3623.6	3102.0	4119.3	4111.7
17.5°	3345.3	3111.1	3375.7	3254.1	3984.0	4022.0
20°	2983.4	3337.7	3018.4	3406.1	3509.5	3933.8
22.5°	3620.5	3760.4	3479.1	3161.3	3176.5	3781.7
25°	3710.3	3938.3	3640.3	2839.0	2893.7	3640.3
27.5°	3815.2	4075.2	3792.4	3016.9	2723.4	3535.4
30°	3859.3	4026.5	3929.2	3248.0	2776.6	3369.6
32.5°	3774.1	3707.2	3860.8	3187.2	2740.1	3238.9
35°	3331.6	3281.4	3515.6	3270.8	2706.7	3045.8
37.5°	2826.8	2988.0	3086.8	3283.0	2469.5	2931.7
40°	2784.2	3061.0	2851.1	3187.2	2261.1	2671.7
42.5°	2849.6	2896.7	2793.3	2884.6	2089.3	2577.4
45°	2534.8	2536.4	2703.6	2539.4	2107.5	2360.0
47.5°	2206.4	2291.5	2369.1	2262.6	2092.3	2177.5
50°	1937.2	2134.9	2124.3	2136.4	1949.4	1982.9
52.5°	1937.2	1855.1	1876.4	2078.7	1859.7	1789.7
55°	1648.3	1617.9	1756.3	1789.7	1786.7	1616.4
57.5°	1462.8	1613.4	1511.5	1540.4	1605.8	1421.8
60°	1298.6	1253.0	1447.6	1350.3	1423.3	1245.4
62.5°	1014.2	1053.8	1122.2	1275.8	1189.1	1020.3
65°	868.3	929.1	971.7	1067.5	962.5	859.1
67.5°	818.1	843.9	831.8	977.7	827.2	643.2
70°	719.2	801.4	746.6	732.9	682.7	550.5
72.5°	599.1	625.0	682.7	583.9	527.6	459.2
75°	510.9	535.3	539.8	504.8	518.5	377.1
77.5°	406.0	431.8	428.8	430.3	428.8	304.1
80°	319.3	337.6	337.6	330.0	288.9	237.2
82.5°	240.3	258.5	263.1	238.7	214.4	170.3
85°	171.8	193.1	191.6	170.3	141.4	112.5
87.5°	111.0	135.3	138.4	109.5	83.6	56.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)