



IES ROAD REPORT

PHOTOMETRIC FILENAME : ALX MD S UV 850.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] Q2017011701-A (s)

[TESTLAB] QSSI

[MANUFAC] LumenFocus, LLC

[ISSUEDATE] 01/17/17

[LUMCAT] ALX MD S UV 850

[LUMINAIRE] ALX WITH TWO 167 WATT LED ARRAYS WITH 30 DEGREE OPTICS

[LAMPCAT] SAMSUNG 351B LEDs

[LAMP] SAMSUNG 351B LEDs

CHARACTERISTICS

IES Classification	Type VS
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	41368
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	354
Ballast Factor	1.00
Upward Waste Light Ratio	0.01
Maximum Candela	86761.512
Maximum Candela Angle	270H 2.5V
Maximum Candela (<90 Degrees Vertical)	86761.512
Maximum Candela Angle (<90 Degrees Vertical)	270H 2.5V
Maximum Candela At 90 Degrees Vertical	11.134 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	534.638 (1.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	13779.0	N.A.	33.3
FM - Front-Medium (30-60)	4756.0	N.A.	11.5
FH - Front-High (60-80)	1037.5	N.A.	2.5
FVH - Front-Very High (80-90)	38.1	N.A.	0.1
BL - Back-Low (0-30)	14977.5	N.A.	36.2
BM - Back-Medium (30-60)	4890.9	N.A.	11.8
BH - Back-High (60-80)	1236.8	N.A.	3.0
BVH - Back-Very High (80-90)	70.7	N.A.	0.2
UL - Uplight-Low (90-100)	7.6	N.A.	0.0
UH - Uplight-High (100-180)	574.2	N.A.	1.4
Total	41368.3	N.A.	100.0
BUG Rating	B5-U4-G1		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	10	20	30	40	50	60	70	80	90
0.0	85209.78285209.78285209.78285209.78285209.78285209.78285209.78285209.78285209.78285209.782									
2.5	81980.70381786.28881556.52781370.95381317.92681786.28881812.79181945.35881998.38584075.068									
5.0	76643.17276289.68075945.04975724.11676325.04076351.54876510.60476749.21577014.31678640.324									
7.5	69317.30468804.76168380.58668928.47268893.12868857.78369069.86269388.00869803.33871005.171									
10.0	60621.70660038.48059552.44560144.50959172.44660003.12060197.54560533.34561010.54261779.363									
12.5	51342.88250777.31250264.77050839.17150733.12750565.22550724.29050035.00551448.92652836.332									
15.0	42293.80841807.77442187.76341843.11841692.89841498.47341498.47341648.70842037.52943062.629									
17.5	34914.93134499.58634093.08733801.46433615.88833324.26733209.38933218.22334287.49834243.319									
20.0	27898.36627544.88627209.07526970.47726776.06626396.07826201.65626077.94726899.77826793.731									
22.5	22163.16221862.69521615.26221385.49819556.24517496.34517636.85217376.15817369.09920775.754									
25.0	17487.51217239.18617088.07216884.82816682.45416277.72816374.92816101.86516076.24716065.640									
27.5	13787.46113616.02613544.44513392.45012887.85812815.39612791.54012497.26312434.52712424.801									
30.0	10629.12610774.05110761.68010652.98510447.96710345.45710029.0949748.077 9661.475 9676.498									
32.5	8641.688 8576.293 8584.247 8495.877 8300.579 8001.007 7917.938 7681.107 7587.435 7661.666									
35.0	6944.103 6902.568 6907.871 6821.269 6638.343 6534.067 6314.909 6150.542 6055.985 6168.215									
37.5	5656.554 5643.298 5636.229 5540.790 5375.538 5283.633 5135.171 5022.058 4947.827 5054.756									
40.0	4696.858 4697.741 4681.834 4672.113 4502.444 4369.889 4270.915 4197.567 4145.430 4533.372									
42.5	3920.970 3987.248 3969.573 3873.250 3779.578 3692.976 3646.139 3599.304 3560.421 3668.232									
45.0	3440.239 3440.239 3483.540 3335.961 3248.476 3189.268 3190.151 3160.106 3130.944 3239.639									
47.5	3017.831 3026.667 3064.666 2929.461 2838.440 2816.348 2852.579 2834.021 2810.161 2952.436									
50.0	2682.909 2700.582 2727.978 2643.142 2509.704 2528.261 2587.469 2574.213 2570.679 2661.700									
52.5	2395.707 2414.264 2451.379 2375.382 2244.594 2290.546 2358.592 2344.452 2336.498 2450.496									
55.0	2193.340 2204.827 2198.642 2143.852 2019.251 2083.761 2142.085 2156.224 2150.922 2239.292									
57.5	1972.414 1983.903 1992.740 1933.532 1746.895 1823.954 1974.182 1968.880 1992.740 2082.878									
60.0	1751.578 1759.532 1755.820 1763.156 1621.852 1719.677 1758.913 1763.597 1763.244 1929.998									
62.5	1562.909 1600.201 1646.860 1583.853 1429.029 1571.481 1704.919 1712.254 1708.896 1786.838									
65.0	1336.682 1386.788 1481.520 1396.774 1239.917 1364.607 1553.454 1562.556 1541.435 1617.168									
67.5	1106.214 1154.464 1270.758 1186.719 1066.006 1186.100 1343.045 1332.794 1268.019 1292.851									
70.0	775.003 854.271 1078.731 981.790 891.298 969.329 1120.972 1114.609 1020.937 1018.904									
72.5	570.251 660.388 854.802 811.677 692.555 786.050 900.578 869.560 652.700 623.008									
75.0	388.385 487.448 661.360 609.487 529.512 578.734 668.429 668.783 481.350 458.639									
77.5	256.184 345.350 466.593 423.821 306.379 349.060 470.304 474.811 304.611 274.741									
80.0	153.145 224.813 267.231 235.506 173.116 190.614 269.087 309.206 196.888 174.884									
82.5	70.519 97.648 86.160 81.831 76.175 86.338 90.755 136.531 97.030 87.133									
85.0	17.851 17.674 15.907 18.558 16.702 19.883 24.125 25.450 27.572 23.330									
87.5	9.190 8.837 8.660 8.483 8.483 8.660 9.102 10.251 10.693 10.781									
90.0	6.539 6.627 6.716 6.716 6.539 6.539 6.451 6.363 6.363 6.893									
92.5	6.716 6.716 6.716 6.627 6.627 6.539 6.451 6.363 6.275 7.070									
95.0	6.805 6.805 6.805 6.716 6.716 6.627 6.451 6.363 6.275 7.158									
97.5	6.981 7.070 6.893 6.893 6.805 6.716 6.627 6.451 6.451 7.512									
100.0	7.512 7.512 7.424 7.334 7.334 7.246 6.981 6.893 6.805 7.777									
102.5	7.777 7.777 7.688 7.512 7.512 7.512 7.246 7.070 7.070 8.129									
105.0	8.129 8.041 7.865 7.777 7.777 7.688 7.424 7.246 7.334 8.483									
107.5	8.395 8.307 8.129 8.041 8.041 7.865 7.688 7.600 7.512 8.749									
110.0	8.660 8.572 8.395 8.307 8.307 8.307 7.953 7.777 7.777 9.102									
112.5	8.926 8.749 8.660 8.660 8.660 8.572 8.219 8.041 8.129 9.368									
115.0	9.190 9.014 8.837 8.837 8.837 8.749 8.395 8.395 8.307 9.721									
117.5	9.456 9.278 9.190 9.102 9.102 9.014 8.749 8.395 8.572 9.985									
120.0	9.809 9.809 9.632 9.632 9.544 9.278 9.278 9.102 9.102 10.251									
122.5	10.958 10.870 10.781 10.604 10.604 10.516 10.427 10.339 10.163 10.870									
125.0	12.902 12.814 12.814 12.548 12.548 12.460 12.283 12.283 12.107 12.195									
127.5	16.172 16.260 15.907 15.995 15.995 15.907 15.819 15.553 15.200 15.111									
130.0	22.180 22.358 21.828 21.828 22.004 21.916 21.562 20.679 20.590 20.502									

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CANDELA TABULATION - (Cont.)

27.5	15959.59616313.07216569.35016604.69416463.30615729.82915438.20716917.51816926.36316306.882
30.0	12398.29012725.25612972.68913034.55612902.00112628.04512389.45713587.74113353.57013263.430
32.5	9923.934 10197.88110171.37010233.22810136.0219923.934 9490.922 10672.42510567.26610330.435
35.0	7643.992 7864.916 8032.819 8094.677 8041.657 7864.916 7705.850 8269.649 8410.158 8454.342
37.5	6132.867 6274.258 6389.140 6450.999 6424.487 6318.444 6203.563 6794.757 6774.432 6831.873
40.0	5116.615 5196.147 5258.006 5187.310 5213.821 5160.799 5072.429 5549.626 5554.928 5605.299
42.5	4586.396 4559.883 4559.883 4612.906 4559.883 4542.210 4551.047 4623.510 4637.650 4685.369
45.0	3707.115 3709.766 3674.418 3639.954 3715.951 3712.417 3651.442 3882.088 3953.667 3919.202
47.5	3269.685 3256.429 3181.315 3191.919 3241.406 3249.359 3185.732 3427.866 3432.285 3450.842
50.0	2940.065 2910.903 2805.742 2814.580 2917.088 2894.996 2822.533 3021.365 3025.784 3040.806
52.5	2681.141 2652.863 2514.122 2523.842 2623.701 2614.863 2529.145 2692.629 2685.560 2693.513
55.0	2454.030 2440.775 2274.639 2279.058 2333.847 2341.800 2288.778 2426.636 2412.497 2434.589
57.5	2268.454 2242.826 2070.505 2052.831 2144.736 2125.294 2070.505 2183.619 2168.596 2191.572
60.0	2109.389 2077.575 1888.463 1853.999 1960.043 1943.253 1881.393 1980.368 1972.414 1972.414
62.5	1978.601 1934.416 1699.352 1677.259 1793.908 1780.653 1703.770 1749.281 1753.964 1750.076
65.0	1857.535 1791.257 1520.845 1497.869 1650.748 1633.075 1556.193 1627.331 1595.960 1634.665
67.5	1686.981 1619.820 1340.571 1311.409 1485.498 1461.638 1348.524 1418.071 1409.940 1450.945
70.0	1451.916 1419.220 1145.274 1125.831 1268.107 1246.015 1113.460 1176.733 1181.151 1230.727
72.5	1211.550 1120.529 955.278 927.000 1055.136 1051.602 871.326 931.772 951.743 1056.904
75.0	972.068 925.233 777.654 771.469 852.769 815.654 558.498 584.656 659.063 811.589
77.5	745.841 704.308 586.776 556.730 630.961 632.728 464.826 406.767 490.541 601.711
80.0	534.638 500.174 456.873 466.593 473.663 469.244 256.273 256.007 331.741 402.524
82.5	459.524 368.591 194.590 182.130 258.482 248.496 152.526 151.024 189.730 176.121
85.0	124.249 107.988 93.848 91.640 88.282 78.826 59.649 66.454 64.952 57.793
87.5	26.423 28.279 27.394 23.772 20.767 15.200 13.785 15.377 15.641 14.404
90.0	11.046 11.134 10.870 10.339 9.721 8.837 8.041 7.865 7.688 6.893
92.5	6.627 6.805 6.805 6.805 6.805 6.805 6.893 6.451 6.539 6.539
95.0	6.716 6.805 6.805 6.805 6.805 6.893 6.981 6.451 6.451 6.539
97.5	6.716 6.805 6.893 6.981 7.070 6.981 7.070 6.627 6.539 6.627
100.0	6.805 6.981 6.981 7.070 7.070 7.158 7.246 7.070 6.981 7.070
102.5	7.070 7.158 7.158 7.158 7.158 7.334 7.512 7.246 7.246 7.246
105.0	7.158 7.158 7.334 7.334 7.334 7.512 7.777 7.512 7.334 7.424
107.5	7.424 7.512 7.512 7.512 7.512 7.777 7.953 7.688 7.688 7.600
110.0	7.688 7.777 7.777 7.777 7.777 7.865 8.219 7.865 7.865 7.865
112.5	8.041 8.041 8.129 8.041 8.041 8.219 8.395 8.129 7.953 8.041
115.0	8.307 8.307 8.395 8.219 8.307 8.395 8.660 8.219 8.129 8.219
117.5	8.572 8.572 8.572 8.483 8.483 8.572 8.749 8.395 8.307 8.307
120.0	8.749 8.749 8.749 8.660 8.572 8.660 8.926 8.749 8.749 8.749
122.5	9.278 9.278 9.278 9.102 9.190 9.102 9.368 9.632 9.544 9.632
125.0	10.604 10.339 10.427 10.339 10.251 10.163 10.163 11.134 11.134 11.312
127.5	12.460 12.283 12.460 12.372 12.195 12.107 12.283 14.228 13.963 14.139
130.0	16.702 16.436 16.790 16.614 16.348 16.348 16.436 18.646 18.911 19.177
132.5	23.065 22.711 22.358 22.887 22.799 22.711 22.799 26.158 26.599 27.218
135.0	35.348 34.906 33.138 34.111 35.348 35.436 35.701 36.055 36.585 37.381
137.5	49.840 49.222 48.869 48.427 50.194 50.371 50.725 51.520 52.403 51.520
140.0	68.841 68.310 67.956 67.780 70.078 70.607 71.138 75.910 72.287 75.998
142.5	92.346 91.904 91.816 91.816 92.170 95.440 96.323 99.062 100.477 102.155
145.0	117.090 116.825 120.449 121.155 121.685 122.569 126.810 138.475 140.155 141.922
147.5	153.233 153.763 150.760 155.177 155.884 157.121 162.070 190.702 192.205 193.971
150.0	189.288 195.120 196.534 197.683 198.832 199.893 200.953 267.231 268.290 261.310
152.5	244.342 246.464 256.096 257.775 259.188 260.161 260.780 350.652 351.006 351.182
155.0	359.489 377.869 380.344 381.846 382.464 367.708 381.669 453.514 452.278 450.863
157.5	505.917 511.749 528.805 518.731 532.782 533.046 531.810 546.655 543.475 540.646
160.0	611.165 619.208 626.366 641.918 643.863 644.039 642.714 629.547 624.333 619.914
162.5	688.313 703.071 719.861 720.480 731.260 732.675 731.526 690.345 683.894 674.174
165.0	711.024 740.097 759.008 773.944 781.543 784.990 785.519 721.010 712.968 706.340

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CANDELA TABULATION - (Cont.)

167.5	638.030	697.945	742.484	774.650	790.026	799.836	804.784	724.102	718.447	710.759
170.0	547.186	601.092	647.132	691.406	718.270	745.046	760.423	696.796	691.759	684.867
172.5	485.945	508.127	537.465	574.581	593.934	612.580	633.612	639.268	642.449	635.291
175.0	435.133	443.264	454.310	470.482	487.536	506.183	517.936	565.037	578.557	573.786
177.5	408.357	412.422	418.167	425.589	432.306	439.905	447.240	510.778	509.276	510.954
180.0	432.210	432.210	432.210	432.210	432.210	432.210	432.210	432.210	432.210	432.210

Vert. Horizontal Angles
Angles

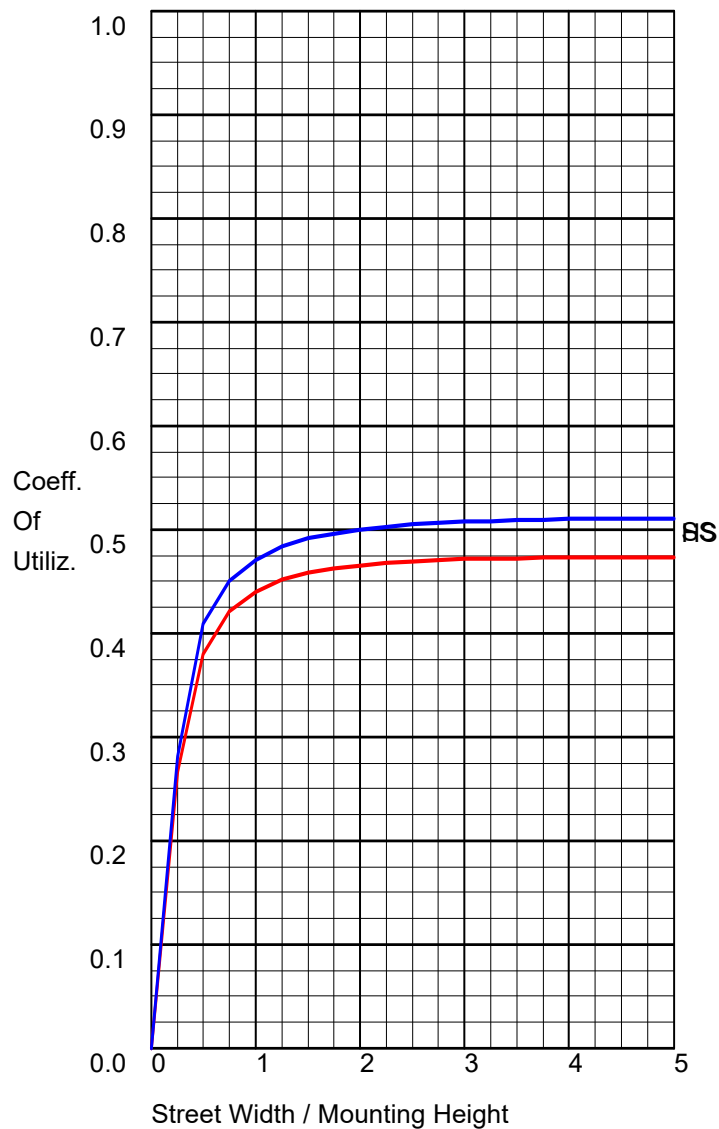
	300	310	320	330	340	350	360
0.0	85209.78285209.78285209.78285209.78285209.78285209.78285209.782						
2.5	84614.12984251.81283633.21183491.82282952.77082493.25081980.703						
5.0	80672.83179983.54079091.01378905.43478065.92377341.29276643.172						
7.5	74433.92273461.85373152.55372145.14671102.36870174.49269317.304						
10.0	66427.60965252.29064978.34963794.19362627.70561584.95360621.706						
12.5	57378.53556132.52655885.09354656.75253454.91952385.64451342.882						
15.0	48108.54246959.73146729.96645536.97944361.66043354.25242293.808						
17.5	40217.10939192.02338166.93637115.33735993.04035091.66434914.931						
20.0	32475.92531627.56830743.86929824.81728773.21928013.24127898.366						
22.5	26007.24525370.97924628.68123859.86022878.94922737.56322163.162						
25.0	19193.93517366.44417600.62817369.98017309.00617496.34517487.512						
27.5	16520.74516251.21715751.92315149.24014398.97813819.28213787.461						
30.0	13203.33613028.36612640.42611801.79411709.88811195.57610629.126						
32.5	10574.33610475.36110180.2059680.033 9133.024 8907.681 8641.688						
35.0	8506.481 8424.298 8211.326 7970.077 7512.321 7007.729 6944.103						
37.5	6864.570 6823.920 6655.133 6474.858 5991.475 5831.526 5656.554						
40.0	5618.555 5591.161 5472.744 5344.608 5063.593 4832.946 4696.858						
42.5	4673.881 4627.046 4548.396 4482.118 4274.449 4080.920 3920.970						
45.0	3958.969 3898.878 3909.482 3830.832 3673.535 3514.469 3440.239						
47.5	3419.029 3338.612 3366.008 3331.543 3214.895 3042.574 3017.831						
50.0	3002.807 2933.878 2941.832 2934.763 2849.044 2737.698 2682.909						
52.5	2667.886 2538.866 2600.725 2612.212 2538.866 2446.077 2395.707						
55.0	2399.242 2271.105 2310.872 2327.662 2275.524 2211.014 2193.340						
57.5	2145.620 2012.181 2057.250 2090.831 2039.575 1983.903 1972.414						
60.0	1928.230 1763.332 1753.876 1751.490 1761.388 1747.956 1751.578						
62.5	1728.779 1567.239 1628.656 1694.846 1638.112 1599.494 1562.909						
65.0	1547.179 1353.120 1408.881 1516.780 1451.209 1353.120 1336.682						
67.5	1354.444 1153.227 1217.913 1346.669 1250.522 1148.278 1106.214						
70.0	1137.231 971.273 1025.444 1136.613 1034.281 822.105 775.003						
72.5	951.213 785.873 846.937 905.879 814.858 606.570 570.251						
75.0	740.186 622.742 654.997 683.894 641.830 425.413 388.385						
77.5	511.573 365.498 458.551 505.034 455.017 292.416 256.184						
80.0	296.835 213.590 254.771 300.635 283.402 183.898 153.145						
82.5	143.955 115.146 119.918 111.169 119.564 85.277 70.519						
85.0	48.515 39.236 34.906 27.306 22.092 17.674 17.851						
87.5	12.902 11.577 10.958 9.544 9.544 9.544 9.190						
90.0	6.627 6.627 6.627 6.627 6.627 6.539 6.539						
92.5	6.539 6.627 6.627 6.627 6.627 6.539 6.716						
95.0	6.539 6.627 6.627 6.627 6.716 6.716 6.805						
97.5	6.716 6.805 6.893 6.893 6.805 6.893 6.981						
100.0	7.158 7.246 7.246 7.334 7.334 7.424 7.512						
102.5	7.334 7.512 7.512 7.512 7.512 7.777 7.777						
105.0	7.512 7.688 7.688 7.688 7.865 8.129 8.129						
107.5	7.777 7.953 7.865 7.953 8.129 8.395 8.395						
110.0	8.041 8.219 8.219 8.219 8.395 8.660 8.660						
112.5	8.219 8.395 8.483 8.483 8.660 8.749 8.926						

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CANDELA TABULATION - (Cont.)

115.0	8.395	8.572	8.660	8.660	8.926	9.102	9.190
117.5	8.660	8.837	8.926	8.926	9.102	9.278	9.456
120.0	9.014	9.278	9.368	9.368	9.632	9.809	9.809
122.5	9.985	10.251	10.339	10.339	10.516	10.870	10.958
125.0	11.665	12.019	11.929	12.283	12.283	12.636	12.902
127.5	14.580	15.023	14.934	15.200	15.465	16.348	16.172
130.0	19.087	19.795	20.148	20.590	21.121	21.739	22.180
132.5	27.041	28.721	28.543	29.162	29.869	30.753	30.223
135.0	37.292	38.176	39.236	40.120	41.092	42.064	41.623
137.5	54.789	54.083	55.320	56.734	57.971	59.296	58.324
140.0	75.292	76.793	78.207	79.621	81.124	80.063	81.300
142.5	104.011	105.601	107.281	108.872	107.016	109.049	110.020
145.0	148.373	150.052	146.960	148.550	145.899	148.108	149.080
147.5	195.651	197.241	198.302	194.237	196.534	197.860	198.656
150.0	262.282	263.342	256.980	258.305	259.807	260.956	261.398
152.5	351.094	351.712	351.535	342.256	342.433	342.787	334.038
155.0	449.273	439.286	437.608	435.840	434.515	433.542	432.306
157.5	529.424	525.978	522.178	519.085	516.522	522.707	504.681
160.0	615.319	603.389	597.910	593.404	589.780	580.766	577.939
162.5	667.811	660.741	655.527	650.137	645.276	637.059	633.347
165.0	699.094	690.433	685.131	679.741	672.848	668.429	664.453
167.5	700.684	693.438	687.164	682.745	677.885	673.731	669.667
170.0	674.704	667.546	660.388	658.267	653.583	649.430	645.719
172.5	630.077	625.216	618.854	612.050	610.017	605.511	603.831
175.0	572.459	568.306	561.944	560.265	554.345	549.660	547.098
177.5	508.657	503.708	503.178	495.579	490.011	487.006	487.094
180.0	432.210	432.210	432.210	432.210	432.210	432.210	432.210

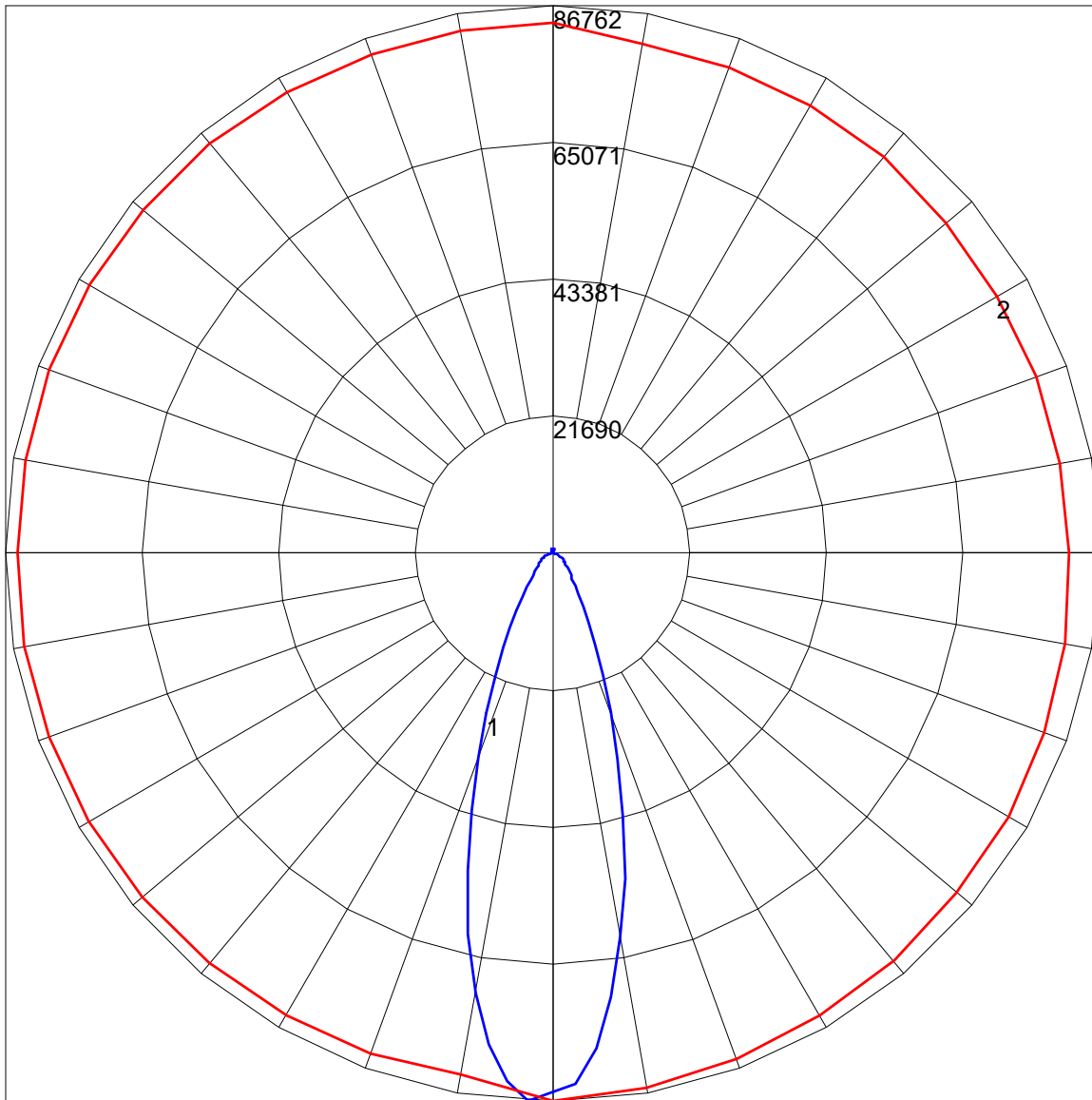
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

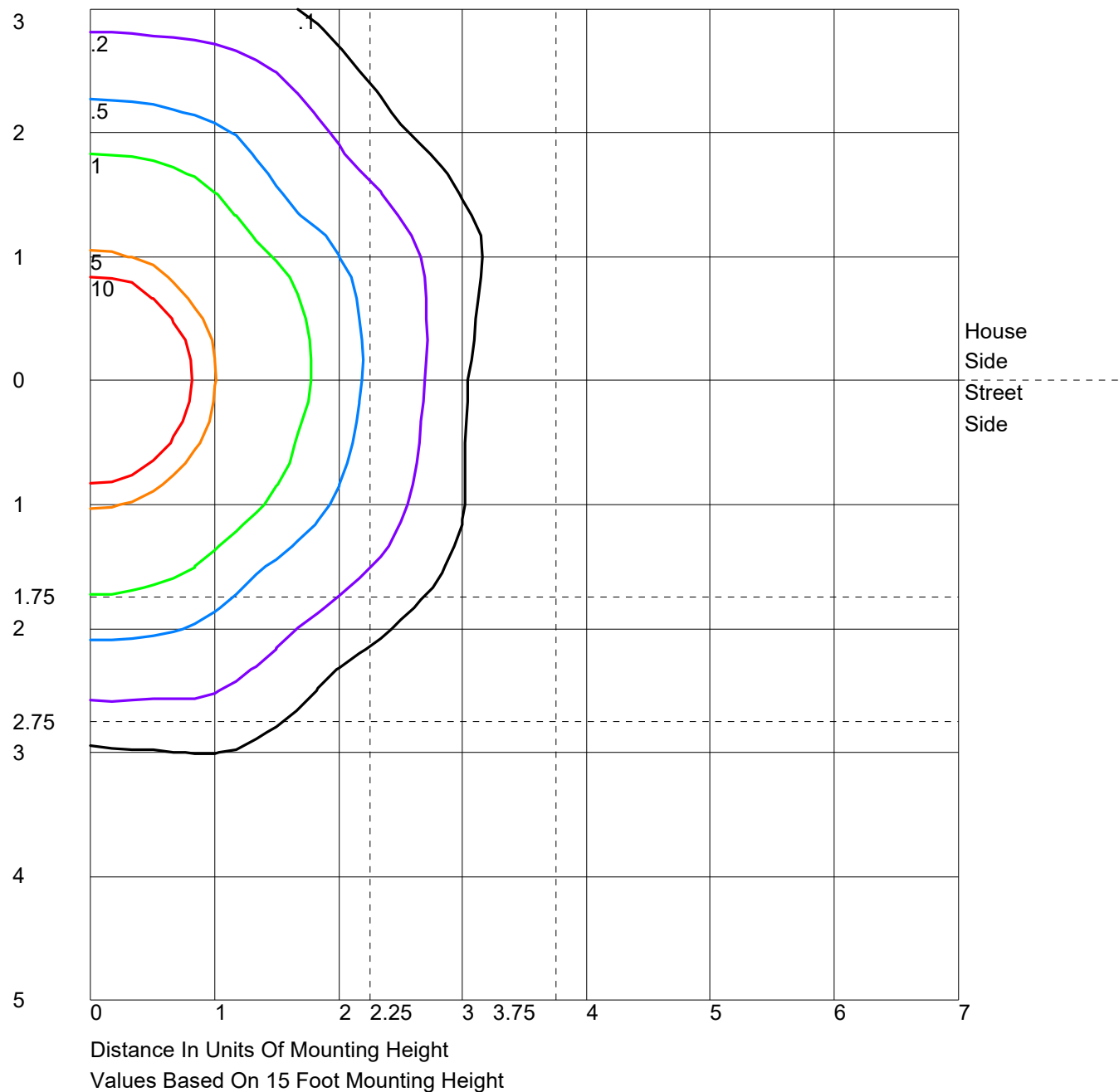
	Lumens	Percent Of Luminaire
Downward Street Side	19610.5	47.4
Downward House Side	21175.9	51.2
Downward Total	40786.4	98.6
Upward Street Side	299.0	0.7
Upward House Side	282.8	0.7
Upward Total	581.8	1.4
Total Flux	41368.2	100.0

POLAR GRAPH

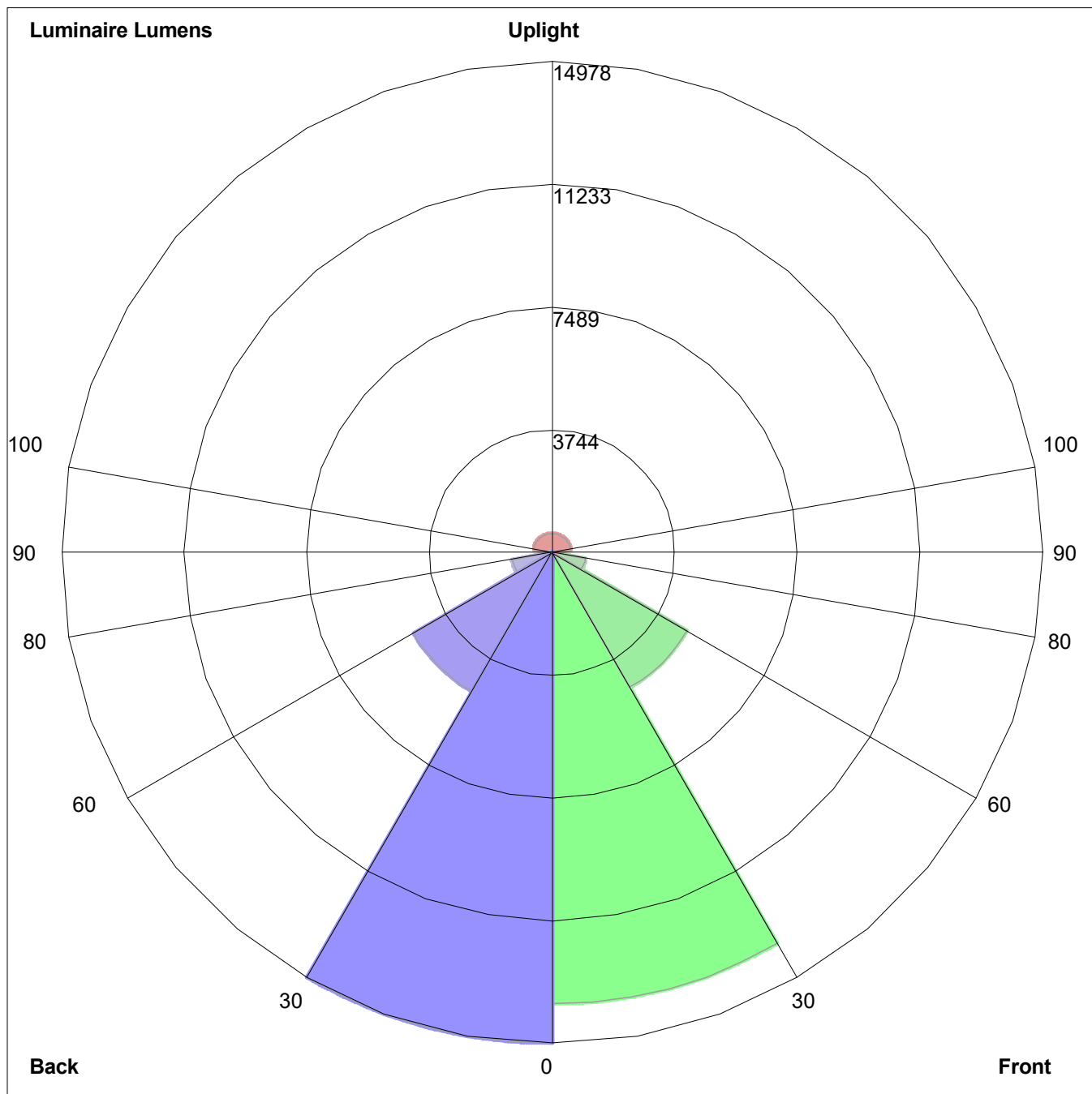


Maximum Candela = 86761.512 Located At Horizontal Angle = 270, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low= 13779.0, Medium= 4756.0, High=1037.5, Very High=38.1
Back: Low=14977.5, Medium=4890.9, High=1236.8, Very High=70.7
Uplight: Low=7.6, High=574.2

BUG Rating : B5-U4-G1