





# Les Industries Spectralux Inc. Spectralux Industries Inc.

2750 Sabourin, Saint-Laurent (Quebec) H4S 1M2 Canada  
Tel.: (514) 332-0082 Fax: (514) 332-3590 www.spectralux.ca

## Photometric Report: S0903052-R1

Prepared for: DBM REFLEX · Test Date: 05 March 2009

Luminaire: Roadway LED · Lumcat: N-T4S

### Photometric Luminaire Characteristics

<b>Nominal Lamp Power</b>	42.00 W	
<b>Rated Lamp Lumens</b>	2791	<b>Notes</b>
<b>Maximum Candela Value</b>	2589	
<b>Maximum Candela Location</b>	50.0 °H, 55.0 °V	1) Luminaire tested in accordance to IES LM-31-95 at a distance great enough so that the inverse-square law applies.
<b>Maximum Candela at 90° Vertical</b>	43	
<b>Maximum Candela at 80° Vertical</b>	122	2) Field performance may differ from laboratory measurements.
<b>IES Classification</b>	Type II, Short, Cutoff	
<b>Downward Street Side Lumens</b>	2318	3) Results are valid for the tested material only.
<b>Downward Street Side Efficiency</b>	83.05 %	
<b>Downward House Side Lumens</b>	473	4) All data published in this report are based on absolute photometry.
<b>Downward House Side Efficiency</b>	16.96 %	
<b>Downward Total Efficiency</b>	100.01 %	5) The luminaire classification is based on IESNA RP-8-00.
<b>Upward Street Side Lumens</b>	0	
<b>Upward Street Side Efficiency</b>	0.00 %	6) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectralux Industries Inc.
<b>Upward House Side Lumens</b>	0	
<b>Upward House Side Efficiency</b>	0.00 %	
<b>Upward Total Efficiency</b>	0.00 %	
<b>Total Luminaire Lumens</b>	2791	
<b>Total Luminaire Efficiency</b>	100.00 %	



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Luminaire: Roadway LED · Lumcat: N-T4S

## Luminaire Classification System (LCS)

<b>Nominal Lamp Power</b>	42.00 W	
<b>Rated Lamp Lumens</b>	2791	<b>Notes</b>
<b>Maximum Candela Value</b>	2589	
<b>Maximum Candela Location</b>	50.0 °H, 55.0 °V	1) Luminaire tested in accordance to IES LM-31-95 at a distance great enough so that the inverse-square law applies.
<b>IES Classification</b>	Type II, Short	
<b>Downward Street Side Lumens</b>	2318	
<b>Downward Street Side Efficiency</b>	83.05 %	2) Field performance may differ from laboratory measurements.
<b>Downward House Side Lumens</b>	473	
<b>Downward House Side Efficiency</b>	16.96 %	3) Results are valid for the tested material only.
<b>Downward Total Efficiency</b>	100.01 %	
<b>Upward Street Side Lumens</b>	0	4) All data published in this report are based on absolute photometry.
<b>Upward Street Side Efficiency</b>	0.00 %	
<b>Upward House Side Lumens</b>	0	5) The luminaire classification is based on IESNA TM-15-07.
<b>Upward House Side Efficiency</b>	0.00 %	
<b>Upward Total Efficiency</b>	0.00 %	6) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectralux Industries Inc.
<b>Total Luminaire Lumens</b>	2791	
<b>Total Luminaire Efficiency</b>	100.00 %	
<b>Trapped Light Lumens</b>	0	
<b>Trapped Light Efficiency</b>	0.00 %	



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Luminaire: Roadway LED · Lumcat: N-T4S

### Luminaire Classification System based on 2791 lumens

#### Downward Forward Light

Luminaire Lumens	2318
% Lamp Lumens	83.05 %
Forward Light Low (0° - 30°)	9.52 %
Forward Light Mid (30° - 60°)	61.47 %
Forward Light High (60° - 80°)	11.09 %
Forward Light Very High (80° - 90°)	0.96 %

#### Notes

1) Luminaire tested in accordance to IES LM-31-95 at a distance great enough so that the inverse-square law applies.

2) Field performance may differ from laboratory measurements.

#### Downward Back Light

Luminaire Lumens	473
% Lamp Lumens	16.96 %
Back Light Low (0° - 30°)	4.34 %
Back Light Mid (30° - 60°)	8.10 %
Back Light High (60° - 80°)	3.38 %
Back Light Very High (80° - 90°)	1.08 %

3) Results are valid for the tested material only.

4) All data published in this report are based on absolute photometry.

5) The luminaire classification is based on IESNA TM-15-07.

#### Uplight

Luminaire Lumens	0
% Lamp Lumens	0.00 %
Uplight Low (90° - 100°)	0.00 %
Uplight Mid (100° - 180°)	0.00 %

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#### Trapped Light

Luminaire Lumens	0
% Lamp Lumens	0.00 %



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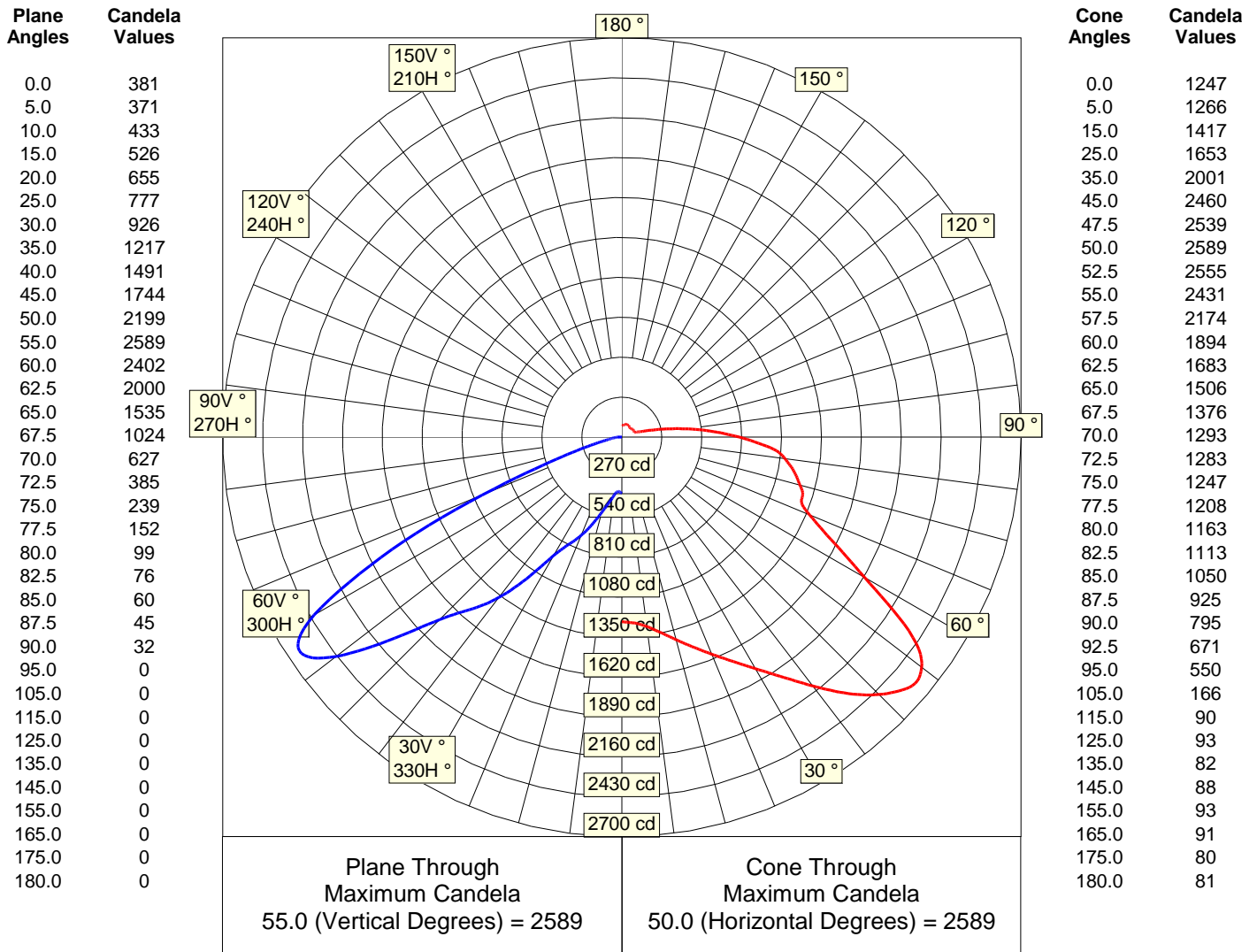
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Luminaire: Roadway LED · Lumcat: N-T4S

### Maximum Plane and Maximum Cone Plots of Candela (1)

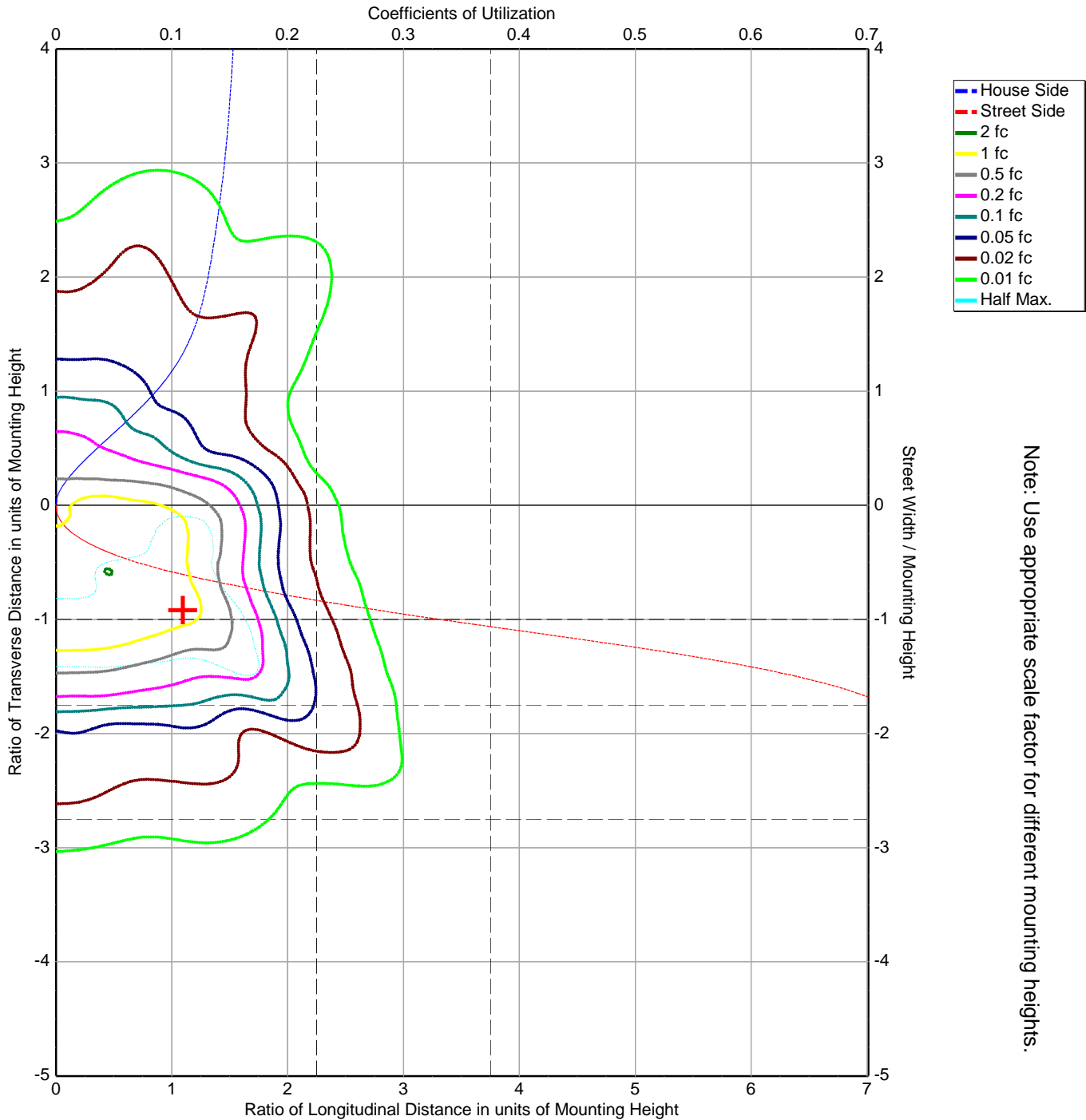




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## ISO Illuminance based on 20 feet of Mounting Height and Coefficients of Utilization Diagram (right side)



Note: Use appropriate scale factor for different mounting heights.



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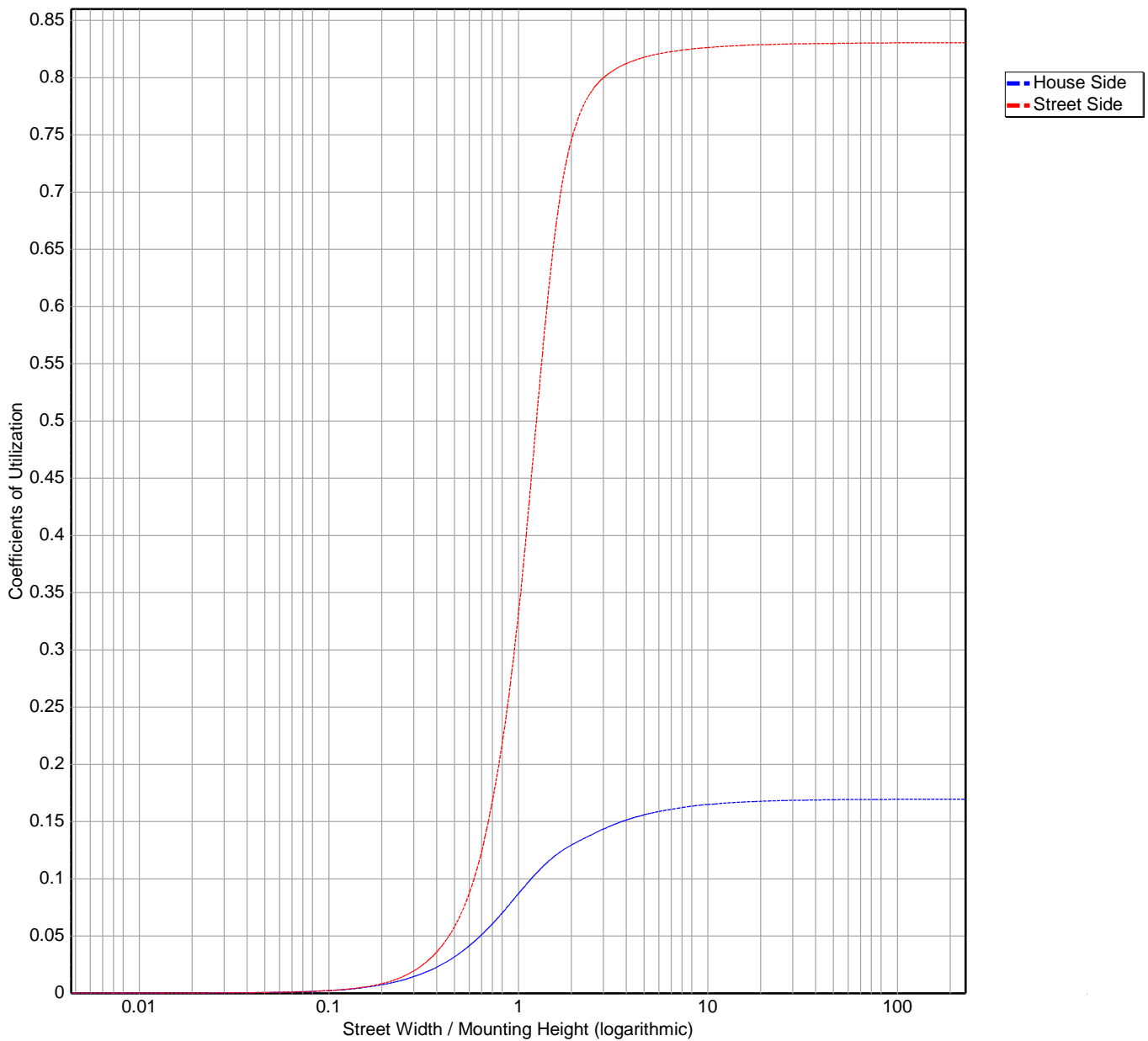
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### Coefficients of Utilization





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## IES File Headers

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IESNA:LM-63-2002
[ISSUEDATE]    05 March 2009
[TESTLAB]      Spectra Lux Industries Inc.
[TEST]         S0903052-R1
[MANUFAC]      DBM REFLEX
[LUMCAT]       N-T4S
[LUMINAIRE]    Roadway LED
[LAMP]         (1 Cluster of 42 LED) 42W LED Clear c/w Electronic Driver DYNASTNG @ 120.00V
[_LAMPDETAILS] Voltage=120V LCL=N/A
[_BURNING]     Vertical Base Up (2,791 Total Luminaire Lumens)
[_REFLECTOR]   None
[_LENS]        Clear Prismatic Collimators
[_HOUSING]     Die Cast Aluminum Heat Sink
[_SKTPOSITION] Fixed
[DISTRIBUTION] Type II, Short
  
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## Candela Table

### Lateral Angles

	0.0	5.0	15.0	25.0	35.0	45.0	47.5	50.0	52.5
<b>0.0</b>	381	381	381	381	381	381	381	381	381
<b>5.0</b>	362	362	359	361	361	366	368	371	374
<b>10.0</b>	416	418	417	427	429	434	433	433	434
<b>15.0</b>	495	495	501	521	524	525	523	526	526
<b>20.0</b>	536	540	560	593	618	644	653	655	653
<b>25.0</b>	621	624	654	706	720	757	764	777	785
<b>30.0</b>	802	801	862	986	1030	936	927	926	933
<b>35.0</b>	958	955	968	1176	1440	1328	1259	1217	1176
<b>40.0</b>	1392	1377	1282	1337	1646	1639	1568	1491	1419
<b>45.0</b>	2006	2010	1953	1878	1851	1868	1807	1744	1659
<b>50.0</b>	1883	1912	2067	2260	2345	2249	2216	2199	2142
<b>55.0</b>	1247	1266	1417	1653	2001	2460	2539	2589	2555
<b>60.0</b>	481	487	616	802	1122	1839	2217	2402	2374
<b>62.5</b>	238	251	262	459	738	1416	1816	2000	1885
<b>65.0</b>	214	223	195	244	488	1043	1391	1535	1392
<b>67.5</b>	203	196	166	209	258	621	959	1024	959
<b>70.0</b>	158	158	141	183	199	333	561	627	585
<b>72.5</b>	120	116	120	162	170	223	313	385	368
<b>75.0</b>	86	86	99	139	143	160	205	239	239
<b>77.5</b>	64	67	82	116	114	120	136	152	154
<b>80.0</b>	48	52	69	94	94	96	99	99	91
<b>82.5</b>	43	47	57	82	82	99	85	76	66
<b>85.0</b>	34	37	44	68	63	81	74	60	55
<b>87.5</b>	25	29	34	47	44	64	53	45	45
<b>90.0</b>	14	20	24	27	28	43	39	32	32
<b>95.0</b>	0	0	0	0	0	0	0	0	0
<b>105.0</b>	0	0	0	0	0	0	0	0	0
<b>115.0</b>	0	0	0	0	0	0	0	0	0
<b>125.0</b>	0	0	0	0	0	0	0	0	0
<b>135.0</b>	0	0	0	0	0	0	0	0	0
<b>145.0</b>	0	0	0	0	0	0	0	0	0
<b>155.0</b>	0	0	0	0	0	0	0	0	0
<b>165.0</b>	0	0	0	0	0	0	0	0	0
<b>175.0</b>	0	0	0	0	0	0	0	0	0
<b>180.0</b>	0	0	0	0	0	0	0	0	0



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### Lateral Angles

	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0
<b>0.0</b>	381	381	381	381	381	381	381	381	381
<b>5.0</b>	376	381	383	386	387	391	392	391	392
<b>10.0</b>	432	436	436	438	439	443	446	445	448
<b>15.0</b>	525	526	520	522	517	519	524	525	529
<b>20.0</b>	656	650	651	648	644	639	629	620	622
<b>25.0</b>	792	803	803	808	793	785	780	764	755
<b>30.0</b>	943	958	969	975	981	984	971	953	939
<b>35.0</b>	1151	1146	1143	1153	1151	1150	1150	1137	1127
<b>40.0</b>	1351	1306	1271	1256	1254	1258	1259	1249	1251
<b>45.0</b>	1596	1529	1484	1450	1426	1416	1410	1398	1392
<b>50.0</b>	2031	1908	1784	1706	1631	1575	1541	1509	1486
<b>55.0</b>	2431	2174	1894	1683	1506	1376	1293	1283	1247
<b>60.0</b>	2180	1865	1512	1143	897	710	596	527	481
<b>62.5</b>	1706	1408	1104	805	605	453	365	297	262
<b>65.0</b>	1159	955	708	527	381	277	215	185	160
<b>67.5</b>	769	611	447	323	250	194	155	132	118
<b>70.0</b>	487	368	290	221	179	146	122	107	96
<b>72.5</b>	309	239	201	160	135	114	100	88	78
<b>75.0</b>	200	169	145	126	114	100	86	77	68
<b>77.5</b>	135	112	107	101	100	91	79	72	72
<b>80.0</b>	81	73	78	78	78	74	69	63	56
<b>82.5</b>	62	56	57	54	51	48	49	50	47
<b>85.0</b>	50	47	47	43	41	39	37	35	34
<b>87.5</b>	43	42	40	37	36	33	30	29	28
<b>90.0</b>	31	26	24	24	23	22	22	22	21
<b>95.0</b>	0	0	0	0	0	0	0	0	0
<b>105.0</b>	0	0	0	0	0	0	0	0	0
<b>115.0</b>	0	0	0	0	0	0	0	0	0
<b>125.0</b>	0	0	0	0	0	0	0	0	0
<b>135.0</b>	0	0	0	0	0	0	0	0	0
<b>145.0</b>	0	0	0	0	0	0	0	0	0
<b>155.0</b>	0	0	0	0	0	0	0	0	0
<b>165.0</b>	0	0	0	0	0	0	0	0	0
<b>175.0</b>	0	0	0	0	0	0	0	0	0
<b>180.0</b>	0	0	0	0	0	0	0	0	0



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## Lateral Angles

	77.5	80.0	82.5	85.0	87.5	90.0	92.5	95.0	105.0
<b>0.0</b>	381	381	381	381	381	381	381	381	381
<b>5.0</b>	394	392	391	391	390	388	388	388	381
<b>10.0</b>	452	450	447	446	442	439	438	431	409
<b>15.0</b>	533	527	522	516	510	503	496	486	443
<b>20.0</b>	626	620	609	595	582	569	555	540	463
<b>25.0</b>	753	741	723	694	663	635	612	590	463
<b>30.0</b>	923	893	866	813	756	709	668	634	445
<b>35.0</b>	1108	1077	1044	988	910	830	753	689	423
<b>40.0</b>	1240	1216	1186	1125	1034	941	847	759	388
<b>45.0</b>	1382	1346	1319	1250	1140	1019	893	768	331
<b>50.0</b>	1459	1416	1372	1289	1156	1006	853	700	242
<b>55.0</b>	1208	1163	1113	1050	925	795	671	550	166
<b>60.0</b>	450	431	415	399	369	331	304	271	117
<b>62.5</b>	242	232	228	224	213	202	192	177	72
<b>65.0</b>	143	135	131	128	124	116	108	89	56
<b>67.5</b>	102	93	87	83	80	75	69	62	48
<b>70.0</b>	84	76	68	63	60	57	55	52	43
<b>72.5</b>	71	64	59	54	50	47	45	42	39
<b>75.0</b>	61	55	51	48	44	41	39	37	35
<b>77.5</b>	57	49	45	42	39	37	35	30	33
<b>80.0</b>	47	43	39	34	31	28	27	26	32
<b>82.5</b>	43	37	32	30	26	23	21	19	30
<b>85.0</b>	32	30	29	25	21	18	16	16	30
<b>87.5</b>	26	24	22	20	16	13	11	13	28
<b>90.0</b>	20	18	17	15	11	8	9	12	22
<b>95.0</b>	0	0	0	0	0	0	0	0	0
<b>105.0</b>	0	0	0	0	0	0	0	0	0
<b>115.0</b>	0	0	0	0	0	0	0	0	0
<b>125.0</b>	0	0	0	0	0	0	0	0	0
<b>135.0</b>	0	0	0	0	0	0	0	0	0
<b>145.0</b>	0	0	0	0	0	0	0	0	0
<b>155.0</b>	0	0	0	0	0	0	0	0	0
<b>165.0</b>	0	0	0	0	0	0	0	0	0
<b>175.0</b>	0	0	0	0	0	0	0	0	0
<b>180.0</b>	0	0	0	0	0	0	0	0	0



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### Lateral Angles

	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
<b>0.0</b>	381	381	381	381	381	381	381	381
<b>5.0</b>	369	361	352	347	344	341	343	343
<b>10.0</b>	384	361	333	313	296	285	283	284
<b>15.0</b>	390	333	281	240	208	190	181	180
<b>20.0</b>	364	272	211	185	166	153	149	148
<b>25.0</b>	310	226	186	164	154	144	138	136
<b>30.0</b>	269	192	157	142	142	144	145	143
<b>35.0</b>	229	162	137	129	131	128	126	125
<b>40.0</b>	193	144	122	121	122	115	113	112
<b>45.0</b>	157	124	96	108	113	104	102	100
<b>50.0</b>	115	102	83	99	106	96	91	91
<b>55.0</b>	90	93	82	88	93	91	80	81
<b>60.0</b>	73	90	91	89	101	95	79	79
<b>62.5</b>	66	90	100	93	109	103	78	77
<b>65.0</b>	58	91	116	97	117	114	79	77
<b>67.5</b>	58	102	141	101	127	135	84	77
<b>70.0</b>	55	104	165	107	142	138	88	79
<b>72.5</b>	53	101	155	110	129	126	92	82
<b>75.0</b>	51	96	150	108	107	115	93	86
<b>77.5</b>	51	95	134	101	96	109	81	81
<b>80.0</b>	54	95	122	87	82	85	83	62
<b>82.5</b>	55	85	108	89	93	96	64	56
<b>85.0</b>	49	66	82	79	69	78	40	42
<b>87.5</b>	44	51	56	53	51	60	32	25
<b>90.0</b>	28	30	29	39	35	39	25	19
<b>95.0</b>	0	0	0	0	0	0	0	0
<b>105.0</b>	0	0	0	0	0	0	0	0
<b>115.0</b>	0	0	0	0	0	0	0	0
<b>125.0</b>	0	0	0	0	0	0	0	0
<b>135.0</b>	0	0	0	0	0	0	0	0
<b>145.0</b>	0	0	0	0	0	0	0	0
<b>155.0</b>	0	0	0	0	0	0	0	0
<b>165.0</b>	0	0	0	0	0	0	0	0
<b>175.0</b>	0	0	0	0	0	0	0	0
<b>180.0</b>	0	0	0	0	0	0	0	0