



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : A1-ZYZY-STN-35K-CL-12W.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] 2021-0329  
[TESTLAB] ALUZ  
[ISSUE DATE] 2021-0329  
[MANUFAC] ALUZ  
[LUMCAT] A1-ZYZY-STN-35K-CL-12W  
[LUMINAIRE] A1-ZYZY-STN-35K-CL-12W  
[LAMP CAT] A1-ZYZY-STN-35K-CL-12W  
[LAMP] A1-ZYZY-STN-35K-CL-12W

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1698
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	12
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.16 ft
Luminous Width (90-270)	1.00 ft
Luminous Height	0.16 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	19232	21050	32656
55	15459	17198	29947
65	11222	12687	25578
75	6207	7334	18074
85	93	334	6101

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**CANDELA TABULATION**

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
<b>0</b>	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296
<b>3</b>	586.183	583.626	583.981	583.854	584.382	584.891	584.177	584.308	584.291	584.536
<b>6</b>	583.688	581.346	580.997	581.241	582.799	582.342	581.281	581.379	581.852	582.015
<b>9</b>	580.183	577.249	577.406	576.659	578.357	578.205	577.622	577.661	577.686	577.323
<b>12</b>	574.260	571.291	571.586	570.747	571.746	572.438	571.669	571.721	571.654	572.471
<b>15</b>	566.178	563.731	563.571	563.410	564.242	564.747	563.778	564.155	564.370	564.474
<b>18</b>	557.326	554.342	554.285	553.910	555.259	555.176	555.452	554.730	555.302	555.314
<b>21</b>	545.441	543.190	542.869	543.157	544.869	543.989	544.385	543.734	544.508	544.448
<b>24</b>	532.672	530.148	530.197	530.614	531.720	531.765	532.035	531.337	531.965	531.876
<b>27</b>	519.490	516.286	516.241	516.475	517.819	517.946	517.990	517.464	517.844	517.857
<b>30</b>	503.797	499.812	500.438	500.826	502.162	501.994	501.918	502.014	502.383	502.373
<b>33</b>	486.199	483.396	483.327	483.496	485.054	485.155	485.044	484.685	485.128	485.346
<b>36</b>	466.949	464.650	465.016	465.207	466.581	466.129	466.600	466.294	467.055	467.043
<b>39</b>	446.967	444.946	444.996	445.291	446.732	446.207	446.968	446.655	447.160	446.980
<b>42</b>	426.738	423.566	424.045	424.136	425.428	425.303	425.815	425.385	426.092	425.847
<b>45</b>	403.529	400.709	401.623	401.646	403.278	402.900	403.310	403.190	403.327	403.568
<b>48</b>	379.441	376.892	377.733	377.620	379.258	378.696	379.529	379.019	379.197	379.337
<b>51</b>	354.199	350.977	352.789	352.061	353.967	353.211	354.220	353.208	354.265	353.731
<b>54</b>	328.013	324.791	326.175	325.500	327.397	326.504	327.754	326.506	327.724	326.945
<b>57</b>	299.151	297.325	298.009	297.712	299.634	298.688	299.938	298.815	300.116	298.939
<b>60</b>	270.453	267.597	269.178	268.463	270.345	269.261	270.342	269.354	270.273	269.431
<b>63</b>	239.898	237.635	238.815	238.872	239.980	238.986	239.695	238.736	239.647	238.999
<b>66</b>	209.723	206.592	208.164	207.633	208.813	207.700	209.073	207.878	208.608	207.805
<b>69</b>	177.605	175.018	176.736	176.080	177.324	176.223	177.378	175.779	176.739	175.767
<b>72</b>	145.565	143.412	145.267	143.862	145.591	143.922	145.479	143.853	144.908	143.522
<b>75</b>	111.591	110.735	112.993	112.707	114.085	112.867	113.998	112.185	112.650	112.000
<b>78</b>	81.426	76.871	80.689	80.436	82.455	82.913	83.810	82.507	82.578	81.777
<b>81</b>	3.261	9.069	22.971	30.359	48.244	52.853	55.671	53.950	54.454	53.014
<b>84</b>	1.878	1.507	2.559	2.417	3.181	8.743	25.154	29.654	30.382	28.655
<b>87</b>	0.679	0.620	0.914	1.182	1.263	1.451	1.983	5.543	10.540	9.943
<b>90</b>	0.261	0.312	0.218	0.095	0.237	0.240	0.328	0.196	0.381	0.662

**Vert. Angles**      **Horizontal Angles**

	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>
<b>0</b>	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296
<b>3</b>	584.291	584.308	584.177	584.891	584.382	583.854	583.981	583.626	586.183	583.626
<b>6</b>	581.852	581.379	581.281	582.342	582.799	581.241	580.997	581.346	583.688	581.346
<b>9</b>	577.686	577.661	577.622	578.205	578.357	576.659	577.406	577.249	580.183	577.249
<b>12</b>	571.654	571.721	571.669	572.438	571.746	570.747	571.586	571.291	574.260	571.291
<b>15</b>	564.370	564.155	563.778	564.747	564.242	563.410	563.571	563.731	566.178	563.731
<b>18</b>	555.302	554.730	555.452	555.176	555.259	553.910	554.285	554.342	557.326	554.342
<b>21</b>	544.508	543.734	544.385	543.989	544.869	543.157	542.869	543.190	545.441	543.190
<b>24</b>	531.965	531.337	532.035	531.765	531.720	530.614	530.197	530.148	532.672	530.148
<b>27</b>	517.844	517.464	517.990	517.946	517.819	516.475	516.241	516.286	519.490	516.286
<b>30</b>	502.383	502.014	501.918	501.994	502.162	500.826	500.438	499.812	503.797	499.812
<b>33</b>	485.128	484.685	485.044	485.155	485.054	483.496	483.327	483.396	486.199	483.396
<b>36</b>	467.055	466.294	466.600	466.129	466.581	465.207	465.016	464.650	466.949	464.650
<b>39</b>	447.160	446.655	446.968	446.207	446.732	445.291	444.996	444.946	446.967	444.946
<b>42</b>	426.092	425.385	425.815	425.303	425.428	424.136	424.045	423.566	426.738	423.566
<b>45</b>	403.327	403.190	403.310	402.900	403.278	401.646	401.623	400.709	403.529	400.709
<b>48</b>	379.197	379.019	379.529	378.696	379.258	377.620	377.733	376.892	379.441	376.892
<b>51</b>	354.265	353.208	354.220	353.211	353.967	352.061	352.789	350.977	354.199	350.977
<b>54</b>	327.724	326.506	327.754	326.504	327.397	325.500	326.175	324.791	328.013	324.791

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**CANDELA TABULATION - (Cont.)**

57	300.116	298.815	299.938	298.688	299.634	297.712	298.009	297.325	299.151	297.325
60	270.273	269.354	270.342	269.261	270.345	268.463	269.178	267.597	270.453	267.597
63	239.647	238.736	239.695	238.986	239.980	238.872	238.815	237.635	239.898	237.635
66	208.608	207.878	209.073	207.700	208.813	207.633	208.164	206.592	209.723	206.592
69	176.739	175.779	177.378	176.223	177.324	176.080	176.736	175.018	177.605	175.018
72	144.908	143.853	145.479	143.922	145.591	143.862	145.267	143.412	145.565	143.412
75	112.650	112.185	113.998	112.867	114.085	112.707	112.993	110.735	111.591	110.735
78	82.578	82.507	83.810	82.913	82.455	80.436	80.689	76.871	81.426	76.871
81	54.454	53.950	55.671	52.853	48.244	30.359	22.971	9.069	3.261	9.069
84	30.382	29.654	25.154	8.743	3.181	2.417	2.559	1.507	1.878	1.507
87	10.540	5.543	1.983	1.451	1.263	1.182	0.914	0.620	0.679	0.620
90	0.381	0.196	0.328	0.240	0.237	0.095	0.218	0.312	0.261	0.312

**Vert. Angles**      **Horizontal Angles**

	<u>200</u>	<u>210</u>	<u>220</u>	<u>230</u>	<u>240</u>	<u>250</u>	<u>260</u>	<u>270</u>	<u>280</u>	<u>290</u>
0	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296	585.296
3	583.981	583.854	584.382	584.891	584.177	584.308	584.291	584.536	584.291	584.308
6	580.997	581.241	582.799	582.342	581.281	581.379	581.852	582.015	581.852	581.379
9	577.406	576.659	578.357	578.205	577.622	577.661	577.686	577.323	577.686	577.661
12	571.586	570.747	571.746	572.438	571.669	571.721	571.654	572.471	571.654	571.721
15	563.571	563.410	564.242	564.747	563.778	564.155	564.370	564.474	564.370	564.155
18	554.285	553.910	555.259	555.176	555.452	554.730	555.302	555.314	555.302	554.730
21	542.869	543.157	544.869	543.989	544.385	543.734	544.508	544.448	544.508	543.734
24	530.197	530.614	531.720	531.765	532.035	531.337	531.965	531.876	531.965	531.337
27	516.241	516.475	517.819	517.946	517.990	517.464	517.844	517.857	517.844	517.464
30	500.438	500.826	502.162	501.994	501.918	502.014	502.383	502.373	502.383	502.014
33	483.327	483.496	485.054	485.155	485.044	484.685	485.128	485.346	485.128	484.685
36	465.016	465.207	466.581	466.129	466.600	466.294	467.055	467.043	467.055	466.294
39	444.996	445.291	446.732	446.207	446.968	446.655	447.160	446.980	447.160	446.655
42	424.045	424.136	425.428	425.303	425.815	425.385	426.092	425.847	426.092	425.385
45	401.623	401.646	403.278	402.900	403.310	403.190	403.327	403.568	403.327	403.190
48	377.733	377.620	379.258	378.696	379.529	379.019	379.197	379.337	379.197	379.019
51	352.789	352.061	353.967	353.211	354.220	353.208	354.265	353.731	354.265	353.208
54	326.175	325.500	327.397	326.504	327.754	326.506	327.724	326.945	327.724	326.506
57	298.009	297.712	299.634	298.688	299.938	298.815	300.116	298.939	300.116	298.815
60	269.178	268.463	270.345	269.261	270.342	269.354	270.273	269.431	270.273	269.354
63	238.815	238.872	239.980	238.986	239.695	238.736	239.647	238.999	239.647	238.736
66	208.164	207.633	208.813	207.700	209.073	207.878	208.608	207.805	208.608	207.878
69	176.736	176.080	177.324	176.223	177.378	175.779	176.739	175.767	176.739	175.779
72	145.267	143.862	145.591	143.922	145.479	143.853	144.908	143.522	144.908	143.853
75	112.993	112.707	114.085	112.867	113.998	112.185	112.650	112.000	112.650	112.185
78	80.689	80.436	82.455	82.913	83.810	82.507	82.578	81.777	82.578	82.507
81	22.971	30.359	48.244	52.853	55.671	53.950	54.454	53.014	54.454	53.950
84	2.559	2.417	3.181	8.743	25.154	29.654	30.382	28.655	30.382	29.654
87	0.914	1.182	1.263	1.451	1.983	5.543	10.540	9.943	10.540	5.543
90	0.218	0.095	0.237	0.240	0.328	0.196	0.381	0.662	0.381	0.196

**Vert. Angles**      **Horizontal Angles**

	<u>300</u>	<u>310</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>
0	585.296	585.296	585.296	585.296	585.296	585.296	585.296
3	584.177	584.891	584.382	583.854	583.981	583.626	586.183
6	581.281	582.342	582.799	581.241	580.997	581.346	583.688
9	577.622	578.205	578.357	576.659	577.406	577.249	580.183
12	571.669	572.438	571.746	570.747	571.586	571.291	574.260

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**CANDELA TABULATION - (Cont.)**

15	563.778	564.747	564.242	563.410	563.571	563.731	566.178
18	555.452	555.176	555.259	553.910	554.285	554.342	557.326
21	544.385	543.989	544.869	543.157	542.869	543.190	545.441
24	532.035	531.765	531.720	530.614	530.197	530.148	532.672
27	517.990	517.946	517.819	516.475	516.241	516.286	519.490
30	501.918	501.994	502.162	500.826	500.438	499.812	503.797
33	485.044	485.155	485.054	483.496	483.327	483.396	486.199
36	466.600	466.129	466.581	465.207	465.016	464.650	466.949
39	446.968	446.207	446.732	445.291	444.996	444.946	446.967
42	425.815	425.303	425.428	424.136	424.045	423.566	426.738
45	403.310	402.900	403.278	401.646	401.623	400.709	403.529
48	379.529	378.696	379.258	377.620	377.733	376.892	379.441
51	354.220	353.211	353.967	352.061	352.789	350.977	354.199
54	327.754	326.504	327.397	325.500	326.175	324.791	328.013
57	299.938	298.688	299.634	297.712	298.009	297.325	299.151
60	270.342	269.261	270.345	268.463	269.178	267.597	270.453
63	239.695	238.986	239.980	238.872	238.815	237.635	239.898
66	209.073	207.700	208.813	207.633	208.164	206.592	209.723
69	177.378	176.223	177.324	176.080	176.736	175.018	177.605
72	145.479	143.922	145.591	143.862	145.267	143.412	145.565
75	113.998	112.867	114.085	112.707	112.993	110.735	111.591
78	83.810	82.913	82.455	80.436	80.689	76.871	81.426
81	55.671	52.853	48.244	30.359	22.971	9.069	3.261
84	25.154	8.743	3.181	2.417	2.559	1.507	1.878
87	1.983	1.451	1.263	1.182	0.914	0.620	0.679
90	0.328	0.240	0.237	0.095	0.218	0.312	0.261

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	175.33	N.A.	10.30
0-30	457.58	N.A.	26.90
0-40	722.23	N.A.	42.50
0-60	1346.91	N.A.	79.30
0-80	1666.63	N.A.	98.10
0-90	1698.07	N.A.	100.00
10-90	1653.09	N.A.	97.40
20-40	546.90	N.A.	32.20
20-50	826.89	N.A.	48.70
40-70	823.02	N.A.	48.50
60-80	319.72	N.A.	18.80
70-80	121.39	N.A.	7.10
80-90	31.44	N.A.	1.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1698.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	44.98
10-20	130.35
20-30	282.25
30-40	264.65
40-50	279.99
50-60	344.70
60-70	198.33
70-80	121.39
80-90	31.44
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

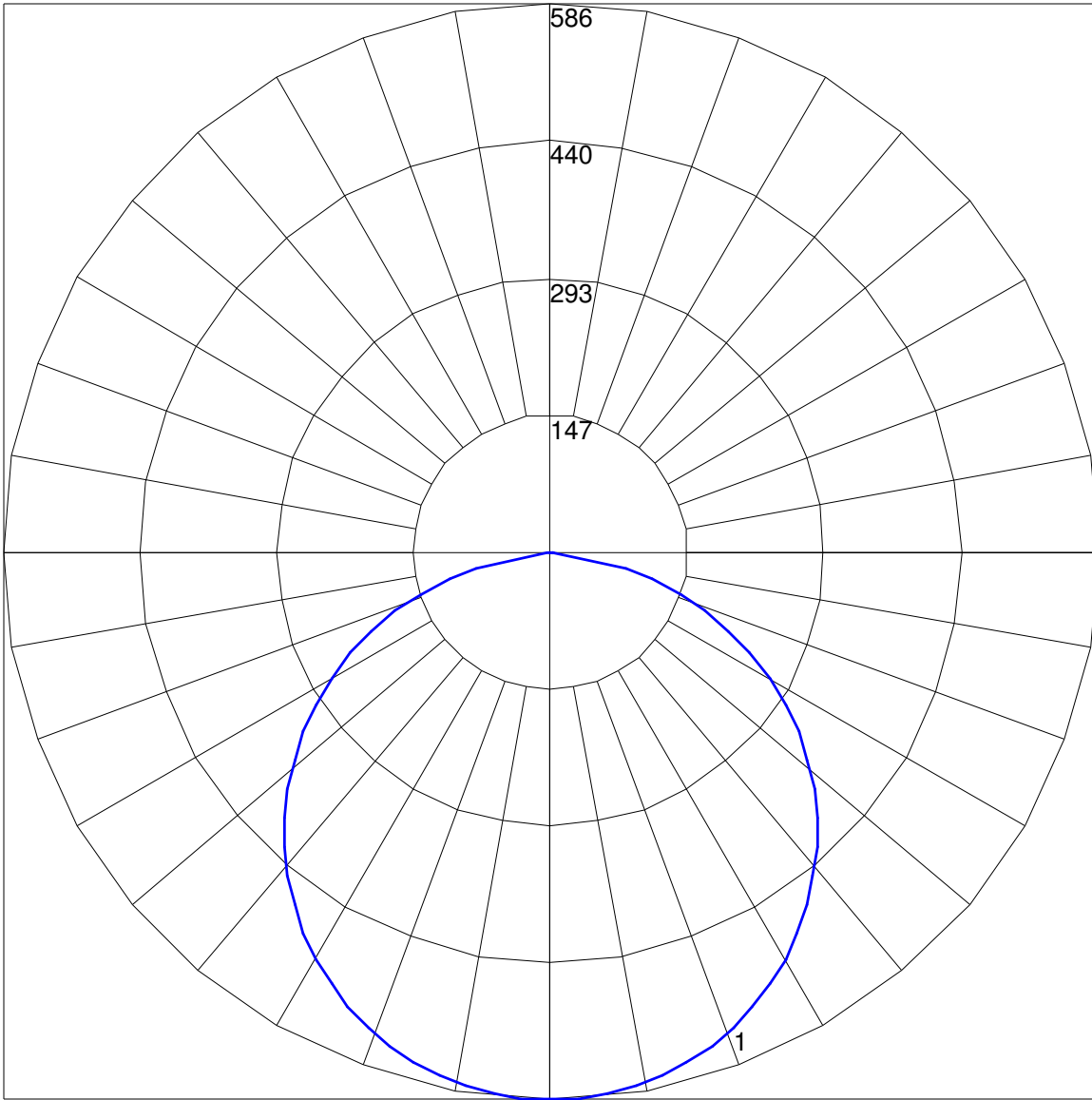
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	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	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42
6	69	55	46	40	67	54	46	39	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	32	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

POLAR GRAPH



Maximum Candela = 586.183 Located At Horizontal Angle = 0, Vertical Angle = 3  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)