



IES INDOOR REPORT
PHOTOMETRIC FILENAME : A1-ZYZY-STN-35K-SF-5W.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-SF-5W
[LUMINAIRE] A1-ZYZY-STN-35K-SF-5W
[LAMP CAT] A1-ZYZY-STN-35K-SF-5W
[LAMP] A1-ZYZY-STN-35K-SF-5W

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	619
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	5
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	7012	7674	11906
55	5636	6270	10918
65	4092	4626	9325
75	2263	2674	6590
85	34	122	2224

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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>
0	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389
3	213.713	212.781	212.910	212.863	213.056	213.242	212.981	213.028	213.023	213.112
6	212.803	211.950	211.822	211.911	212.479	212.313	211.925	211.961	212.133	212.193
9	211.525	210.456	210.513	210.240	210.859	210.804	210.592	210.606	210.614	210.482
12	209.366	208.283	208.391	208.085	208.450	208.702	208.421	208.440	208.415	208.714
15	206.420	205.527	205.468	205.410	205.713	205.897	205.544	205.682	205.760	205.797
18	203.192	202.104	202.083	201.947	202.438	202.409	202.509	202.245	202.454	202.458
21	198.859	198.038	197.921	198.027	198.650	198.329	198.474	198.237	198.518	198.496
24	194.204	193.283	193.302	193.453	193.856	193.873	193.971	193.717	193.946	193.913
27	189.397	188.229	188.213	188.298	188.788	188.835	188.850	188.659	188.797	188.802
30	183.676	182.223	182.452	182.593	183.080	183.019	182.991	183.026	183.160	183.157
33	177.260	176.238	176.213	176.275	176.843	176.880	176.839	176.708	176.870	176.950
36	170.242	169.404	169.537	169.607	170.108	169.943	170.115	170.003	170.280	170.276
39	162.957	162.220	162.238	162.346	162.872	162.680	162.957	162.843	163.027	162.961
42	155.581	154.425	154.599	154.634	155.104	155.059	155.245	155.089	155.346	155.257
45	147.120	146.092	146.425	146.433	147.028	146.891	147.040	146.997	147.046	147.134
48	138.338	137.409	137.715	137.674	138.271	138.066	138.370	138.184	138.249	138.300
51	129.135	127.961	128.621	128.356	129.050	128.775	129.143	128.774	129.159	128.965
54	119.588	118.414	118.918	118.672	119.363	119.038	119.494	119.039	119.483	119.199
57	109.065	108.399	108.649	108.541	109.242	108.896	109.352	108.943	109.417	108.988
60	98.603	97.562	98.138	97.878	98.564	98.168	98.563	98.202	98.537	98.230
63	87.462	86.638	87.068	87.089	87.492	87.131	87.389	87.040	87.371	87.135
66	76.462	75.320	75.893	75.700	76.129	75.724	76.225	75.789	76.055	75.763
69	64.752	63.809	64.435	64.196	64.649	64.248	64.670	64.086	64.436	64.082
72	53.071	52.286	52.962	52.450	53.080	52.472	53.039	52.447	52.831	52.326
75	40.684	40.372	41.196	41.091	41.594	41.150	41.562	40.901	41.071	40.834
78	29.687	28.025	29.418	29.326	30.062	30.229	30.556	30.081	30.107	29.815
81	1.189	3.307	8.375	11.069	17.589	19.269	20.297	19.669	19.853	19.328
84	0.684	0.550	0.933	0.881	1.159	3.188	9.171	10.812	11.077	10.447
87	0.248	0.226	0.333	0.431	0.460	0.529	0.723	2.020	3.843	3.625
90	0.095	0.114	0.080	0.035	0.087	0.088	0.120	0.072	0.139	0.242

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>
0	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389
3	213.023	213.028	212.981	213.242	213.056	212.863	212.910	212.781	213.713	212.781
6	212.133	211.961	211.925	212.313	212.479	211.911	211.822	211.950	212.803	211.950
9	210.614	210.606	210.592	210.804	210.859	210.240	210.513	210.456	211.525	210.456
12	208.415	208.440	208.421	208.702	208.450	208.085	208.391	208.283	209.366	208.283
15	205.760	205.682	205.544	205.897	205.713	205.410	205.468	205.527	206.420	205.527
18	202.454	202.245	202.509	202.409	202.438	201.947	202.083	202.104	203.192	202.104
21	198.518	198.237	198.474	198.329	198.650	198.027	197.921	198.038	198.859	198.038
24	193.946	193.717	193.971	193.873	193.856	193.453	193.302	193.283	194.204	193.283
27	188.797	188.659	188.850	188.835	188.788	188.298	188.213	188.229	189.397	188.229
30	183.160	183.026	182.991	183.019	183.080	182.593	182.452	182.223	183.676	182.223
33	176.870	176.708	176.839	176.880	176.843	176.275	176.213	176.238	177.260	176.238
36	170.280	170.003	170.115	169.943	170.108	169.607	169.537	169.404	170.242	169.404
39	163.027	162.843	162.957	162.680	162.872	162.346	162.238	162.220	162.957	162.220
42	155.346	155.089	155.245	155.059	155.104	154.634	154.599	154.425	155.581	154.425
45	147.046	146.997	147.040	146.891	147.028	146.433	146.425	146.092	147.120	146.092
48	138.249	138.184	138.370	138.066	138.271	137.674	137.715	137.409	138.338	137.409
51	129.159	128.774	129.143	128.775	129.050	128.356	128.621	127.961	129.135	127.961
54	119.483	119.039	119.494	119.038	119.363	118.672	118.918	118.414	119.588	118.414

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CANDELA TABULATION - (Cont.)

57	109.417	108.943	109.352	108.896	109.242	108.541	108.649	108.399	109.065	108.399
60	98.537	98.202	98.563	98.168	98.564	97.878	98.138	97.562	98.603	97.562
63	87.371	87.040	87.389	87.131	87.492	87.089	87.068	86.638	87.462	86.638
66	76.055	75.789	76.225	75.724	76.129	75.700	75.893	75.320	76.462	75.320
69	64.436	64.086	64.670	64.248	64.649	64.196	64.435	63.809	64.752	63.809
72	52.831	52.447	53.039	52.472	53.080	52.450	52.962	52.286	53.071	52.286
75	41.071	40.901	41.562	41.150	41.594	41.091	41.196	40.372	40.684	40.372
78	30.107	30.081	30.556	30.229	30.062	29.326	29.418	28.025	29.687	28.025
81	19.853	19.669	20.297	19.269	17.589	11.069	8.375	3.307	1.189	3.307
84	11.077	10.812	9.171	3.188	1.159	0.881	0.933	0.550	0.684	0.550
87	3.843	2.020	0.723	0.529	0.460	0.431	0.333	0.226	0.248	0.226
90	0.139	0.072	0.120	0.088	0.087	0.035	0.080	0.114	0.095	0.114

Vert. Horizontal Angles
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	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389	213.389
3	212.910	212.863	213.056	213.242	212.981	213.028	213.023	213.112	213.023	213.028
6	211.822	211.911	212.479	212.313	211.925	211.961	212.133	212.193	212.133	211.961
9	210.513	210.240	210.859	210.804	210.592	210.606	210.614	210.482	210.614	210.606
12	208.391	208.085	208.450	208.702	208.421	208.440	208.415	208.714	208.415	208.440
15	205.468	205.410	205.713	205.897	205.544	205.682	205.760	205.797	205.760	205.682
18	202.083	201.947	202.438	202.409	202.509	202.245	202.454	202.458	202.454	202.245
21	197.921	198.027	198.650	198.329	198.474	198.237	198.518	198.496	198.518	198.237
24	193.302	193.453	193.856	193.873	193.971	193.717	193.946	193.913	193.946	193.717
27	188.213	188.298	188.788	188.835	188.850	188.659	188.797	188.802	188.797	188.659
30	182.452	182.593	183.080	183.019	182.991	183.026	183.160	183.157	183.160	183.026
33	176.213	176.275	176.843	176.880	176.839	176.708	176.870	176.950	176.870	176.708
36	169.537	169.607	170.108	169.943	170.115	170.003	170.280	170.276	170.280	170.003
39	162.238	162.346	162.872	162.680	162.957	162.843	163.027	162.961	163.027	162.843
42	154.599	154.634	155.104	155.059	155.245	155.089	155.346	155.257	155.346	155.089
45	146.425	146.433	147.028	146.891	147.040	146.997	147.046	147.134	147.046	146.997
48	137.715	137.674	138.271	138.066	138.370	138.184	138.249	138.300	138.249	138.184
51	128.621	128.356	129.050	128.775	129.143	128.774	129.159	128.965	129.159	128.774
54	118.918	118.672	119.363	119.038	119.494	119.039	119.483	119.199	119.483	119.039
57	108.649	108.541	109.242	108.896	109.352	108.943	109.417	108.988	109.417	108.943
60	98.138	97.878	98.564	98.168	98.563	98.202	98.537	98.230	98.537	98.202
63	87.068	87.089	87.492	87.131	87.389	87.040	87.371	87.135	87.371	87.040
66	75.893	75.700	76.129	75.724	76.225	75.789	76.055	75.763	76.055	75.789
69	64.435	64.196	64.649	64.248	64.670	64.086	64.436	64.082	64.436	64.086
72	52.962	52.450	53.080	52.472	53.039	52.447	52.831	52.326	52.831	52.447
75	41.196	41.091	41.594	41.150	41.562	40.901	41.071	40.834	41.071	40.901
78	29.418	29.326	30.062	30.229	30.556	30.081	30.107	29.815	30.107	30.081
81	8.375	11.069	17.589	19.269	20.297	19.669	19.853	19.328	19.853	19.669
84	0.933	0.881	1.159	3.188	9.171	10.812	11.077	10.447	11.077	10.812
87	0.333	0.431	0.460	0.529	0.723	2.020	3.843	3.625	3.843	2.020
90	0.080	0.035	0.087	0.088	0.120	0.072	0.139	0.242	0.139	0.072

Vert. Horizontal Angles
Angles

	<u>300</u>	<u>310</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>
0	213.389	213.389	213.389	213.389	213.389	213.389	213.389
3	212.981	213.242	213.056	212.863	212.910	212.781	213.713
6	211.925	212.313	212.479	211.911	211.822	211.950	212.803
9	210.592	210.804	210.859	210.240	210.513	210.456	211.525
12	208.421	208.702	208.450	208.085	208.391	208.283	209.366

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CANDELA TABULATION - (Cont.)

15	205.544	205.897	205.713	205.410	205.468	205.527	206.420
18	202.509	202.409	202.438	201.947	202.083	202.104	203.192
21	198.474	198.329	198.650	198.027	197.921	198.038	198.859
24	193.971	193.873	193.856	193.453	193.302	193.283	194.204
27	188.850	188.835	188.788	188.298	188.213	188.229	189.397
30	182.991	183.019	183.080	182.593	182.452	182.223	183.676
33	176.839	176.880	176.843	176.275	176.213	176.238	177.260
36	170.115	169.943	170.108	169.607	169.537	169.404	170.242
39	162.957	162.680	162.872	162.346	162.238	162.220	162.957
42	155.245	155.059	155.104	154.634	154.599	154.425	155.581
45	147.040	146.891	147.028	146.433	146.425	146.092	147.120
48	138.370	138.066	138.271	137.674	137.715	137.409	138.338
51	129.143	128.775	129.050	128.356	128.621	127.961	129.135
54	119.494	119.038	119.363	118.672	118.918	118.414	119.588
57	109.352	108.896	109.242	108.541	108.649	108.399	109.065
60	98.563	98.168	98.564	97.878	98.138	97.562	98.603
63	87.389	87.131	87.492	87.089	87.068	86.638	87.462
66	76.225	75.724	76.129	75.700	75.893	75.320	76.462
69	64.670	64.248	64.649	64.196	64.435	63.809	64.752
72	53.039	52.472	53.080	52.450	52.962	52.286	53.071
75	41.562	41.150	41.594	41.091	41.196	40.372	40.684
78	30.556	30.229	30.062	29.326	29.418	28.025	29.687
81	20.297	19.269	17.589	11.069	8.375	3.307	1.189
84	9.171	3.188	1.159	0.881	0.933	0.550	0.684
87	0.723	0.529	0.460	0.431	0.333	0.226	0.248
90	0.120	0.088	0.087	0.035	0.080	0.114	0.095

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	63.92	N.A.	10.30
0-30	166.82	N.A.	26.90
0-40	263.31	N.A.	42.50
0-60	491.06	N.A.	79.30
0-80	607.63	N.A.	98.10
0-90	619.09	N.A.	100.00
10-90	602.69	N.A.	97.40
20-40	199.39	N.A.	32.20
20-50	301.47	N.A.	48.70
40-70	300.06	N.A.	48.50
60-80	116.56	N.A.	18.80
70-80	44.26	N.A.	7.10
80-90	11.46	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	619.09	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	16.40
10-20	47.52
20-30	102.90
30-40	96.49
40-50	102.08
50-60	125.67
60-70	72.31
70-80	44.26
80-90	11.46
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

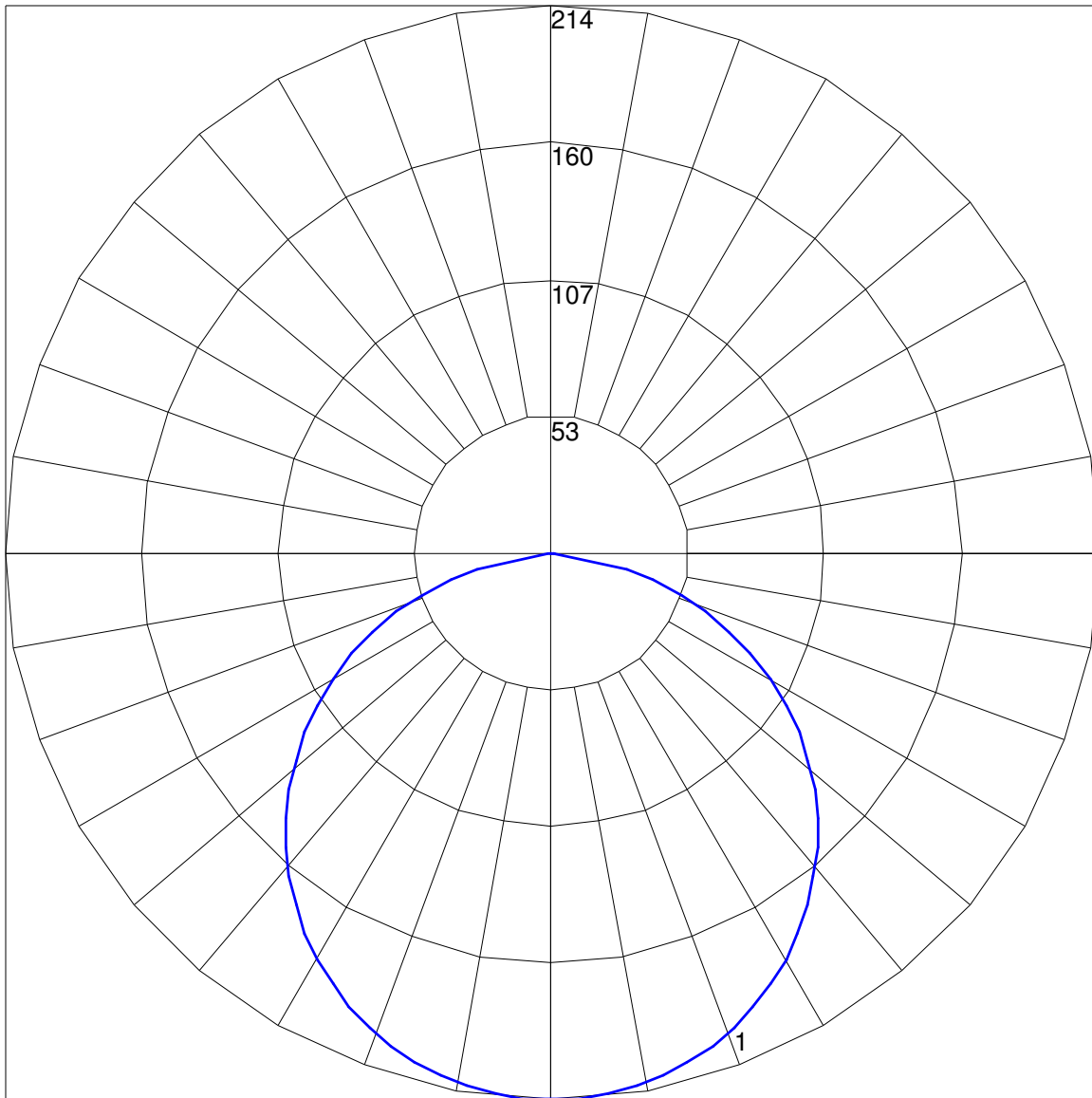
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 = 213.713 Located At Horizontal Angle = 0, Vertical Angle = 3
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)