



IES INDOOR REPORT
PHOTOMETRIC FILENAME : A1-ZYZY-STN-35K-CL-4W.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-4W
[LUMINAIRE] A1-ZYZY-STN-35K-CL-4W
[LAMPCAT] A1-ZYZY-STN-35K-CL-4W
[LAMP] A1-ZYZY-STN-35K-CL-4W

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	566
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	4
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	6411	7017	10885
55	5153	5733	9982
65	3741	4229	8526
75	2069	2445	6025
85	31	111	2034

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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	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099
3	195.394	194.542	194.660	194.618	194.794	194.964	194.726	194.769	194.764	194.845
6	194.563	193.782	193.666	193.747	194.266	194.114	193.760	193.793	193.951	194.005
9	193.394	192.416	192.469	192.220	192.786	192.735	192.541	192.554	192.562	192.441
12	191.420	190.430	190.529	190.249	190.582	190.813	190.556	190.574	190.551	190.824
15	188.726	187.910	187.857	187.803	188.081	188.249	187.926	188.052	188.123	188.158
18	185.775	184.781	184.762	184.637	185.086	185.059	185.151	184.910	185.101	185.105
21	181.814	181.063	180.956	181.052	181.623	181.330	181.462	181.245	181.503	181.483
24	177.557	176.716	176.732	176.871	177.240	177.255	177.345	177.112	177.322	177.292
27	173.163	172.095	172.080	172.158	172.606	172.649	172.663	172.488	172.615	172.619
30	167.932	166.604	166.813	166.942	167.387	167.331	167.306	167.338	167.461	167.458
33	162.066	161.132	161.109	161.165	161.685	161.718	161.681	161.562	161.709	161.782
36	155.650	154.883	155.005	155.069	155.527	155.376	155.533	155.431	155.685	155.681
39	148.989	148.315	148.332	148.430	148.911	148.736	148.989	148.885	149.053	148.993
42	142.246	141.189	141.348	141.379	141.809	141.768	141.938	141.795	142.031	141.949
45	134.510	133.570	133.874	133.882	134.426	134.300	134.437	134.397	134.442	134.523
48	126.480	125.631	125.911	125.873	126.419	126.232	126.510	126.340	126.399	126.446
51	118.066	116.992	117.596	117.354	117.989	117.737	118.073	117.736	118.088	117.910
54	109.338	108.264	108.725	108.500	109.132	108.835	109.251	108.835	109.241	108.982
57	99.717	99.108	99.336	99.237	99.878	99.563	99.979	99.605	100.039	99.646
60	90.151	89.199	89.726	89.488	90.115	89.754	90.114	89.785	90.091	89.810
63	79.966	79.212	79.605	79.624	79.993	79.662	79.898	79.579	79.882	79.666
66	69.908	68.864	69.388	69.211	69.604	69.233	69.691	69.293	69.536	69.268
69	59.202	58.339	58.912	58.693	59.108	58.741	59.126	58.593	58.913	58.589
72	48.522	47.804	48.422	47.954	48.530	47.974	48.493	47.951	48.303	47.841
75	37.197	36.912	37.664	37.569	38.028	37.622	37.999	37.395	37.550	37.333
78	27.142	25.624	26.896	26.812	27.485	27.638	27.937	27.502	27.526	27.259
81	1.087	3.023	7.657	10.120	16.081	17.618	18.557	17.983	18.151	17.671
84	0.626	0.502	0.853	0.806	1.060	2.914	8.385	9.885	10.127	9.552
87	0.226	0.207	0.305	0.394	0.421	0.484	0.661	1.848	3.513	3.314
90	0.087	0.104	0.073	0.032	0.079	0.080	0.109	0.065	0.127	0.221

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	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099
3	194.764	194.769	194.726	194.964	194.794	194.618	194.660	194.542	195.394	194.542
6	193.951	193.793	193.760	194.114	194.266	193.747	193.666	193.782	194.563	193.782
9	192.562	192.554	192.541	192.735	192.786	192.220	192.469	192.416	193.394	192.416
12	190.551	190.574	190.556	190.813	190.582	190.249	190.529	190.430	191.420	190.430
15	188.123	188.052	187.926	188.249	188.081	187.803	187.857	187.910	188.726	187.910
18	185.101	184.910	185.151	185.059	185.086	184.637	184.762	184.781	185.775	184.781
21	181.503	181.245	181.462	181.330	181.623	181.052	180.956	181.063	181.814	181.063
24	177.322	177.112	177.345	177.255	177.240	176.871	176.732	176.716	177.557	176.716
27	172.615	172.488	172.663	172.649	172.606	172.158	172.080	172.095	173.163	172.095
30	167.461	167.338	167.306	167.331	167.387	166.942	166.813	166.604	167.932	166.604
33	161.709	161.562	161.681	161.718	161.685	161.165	161.109	161.132	162.066	161.132
36	155.685	155.431	155.533	155.376	155.527	155.069	155.005	154.883	155.650	154.883
39	149.053	148.885	148.989	148.736	148.911	148.430	148.332	148.315	148.989	148.315
42	142.031	141.795	141.938	141.768	141.809	141.379	141.348	141.189	142.246	141.189
45	134.442	134.397	134.437	134.300	134.426	133.882	133.874	133.570	134.510	133.570
48	126.399	126.340	126.510	126.232	126.419	125.873	125.911	125.631	126.480	125.631
51	118.088	117.736	118.073	117.737	117.989	117.354	117.596	116.992	118.066	116.992
54	109.241	108.835	109.251	108.835	109.132	108.500	108.725	108.264	109.338	108.264

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CANDELA TABULATION - (Cont.)

57	100.039	99.605	99.979	99.563	99.878	99.237	99.336	99.108	99.717	99.108
60	90.091	89.785	90.114	89.754	90.115	89.488	89.726	89.199	90.151	89.199
63	79.882	79.579	79.898	79.662	79.993	79.624	79.605	79.212	79.966	79.212
66	69.536	69.293	69.691	69.233	69.604	69.211	69.388	68.864	69.908	68.864
69	58.913	58.593	59.126	58.741	59.108	58.693	58.912	58.339	59.202	58.339
72	48.303	47.951	48.493	47.974	48.530	47.954	48.422	47.804	48.522	47.804
75	37.550	37.395	37.999	37.622	38.028	37.569	37.664	36.912	37.197	36.912
78	27.526	27.502	27.937	27.638	27.485	26.812	26.896	25.624	27.142	25.624
81	18.151	17.983	18.557	17.618	16.081	10.120	7.657	3.023	1.087	3.023
84	10.127	9.885	8.385	2.914	1.060	0.806	0.853	0.502	0.626	0.502
87	3.513	1.848	0.661	0.484	0.421	0.394	0.305	0.207	0.226	0.207
90	0.127	0.065	0.109	0.080	0.079	0.032	0.073	0.104	0.087	0.104

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	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099	195.099
3	194.660	194.618	194.794	194.964	194.726	194.769	194.764	194.845	194.764	194.769
6	193.666	193.747	194.266	194.114	193.760	193.793	193.951	194.005	193.951	193.793
9	192.469	192.220	192.786	192.735	192.541	192.554	192.562	192.441	192.562	192.554
12	190.529	190.249	190.582	190.813	190.556	190.574	190.551	190.824	190.551	190.574
15	187.857	187.803	188.081	188.249	187.926	188.052	188.123	188.158	188.123	188.052
18	184.762	184.637	185.086	185.059	185.151	184.910	185.101	185.105	185.101	184.910
21	180.956	181.052	181.623	181.330	181.462	181.245	181.503	181.483	181.503	181.245
24	176.732	176.871	177.240	177.255	177.345	177.112	177.322	177.292	177.322	177.112
27	172.080	172.158	172.606	172.649	172.663	172.488	172.615	172.619	172.615	172.488
30	166.813	166.942	167.387	167.331	167.306	167.338	167.461	167.458	167.461	167.338
33	161.109	161.165	161.685	161.718	161.681	161.562	161.709	161.782	161.709	161.562
36	155.005	155.069	155.527	155.376	155.533	155.431	155.685	155.681	155.685	155.431
39	148.332	148.430	148.911	148.736	148.989	148.885	149.053	148.993	149.053	148.885
42	141.348	141.379	141.809	141.768	141.938	141.795	142.031	141.949	142.031	141.795
45	133.874	133.882	134.426	134.300	134.437	134.397	134.442	134.523	134.442	134.397
48	125.911	125.873	126.419	126.232	126.510	126.340	126.399	126.446	126.399	126.340
51	117.596	117.354	117.989	117.737	118.073	117.736	118.088	117.910	118.088	117.736
54	108.725	108.500	109.132	108.835	109.251	108.835	109.241	108.982	109.241	108.835
57	99.336	99.237	99.878	99.563	99.979	99.605	100.039	99.646	100.039	99.605
60	89.726	89.488	90.115	89.754	90.114	89.785	90.091	89.810	90.091	89.785
63	79.605	79.624	79.993	79.662	79.898	79.579	79.882	79.666	79.882	79.579
66	69.388	69.211	69.604	69.233	69.691	69.293	69.536	69.268	69.536	69.293
69	58.912	58.693	59.108	58.741	59.126	58.593	58.913	58.589	58.913	58.593
72	48.422	47.954	48.530	47.974	48.493	47.951	48.303	47.841	48.303	47.951
75	37.664	37.569	38.028	37.622	37.999	37.395	37.550	37.333	37.550	37.395
78	26.896	26.812	27.485	27.638	27.937	27.502	27.526	27.259	27.526	27.502
81	7.657	10.120	16.081	17.618	18.557	17.983	18.151	17.671	18.151	17.983
84	0.853	0.806	1.060	2.914	8.385	9.885	10.127	9.552	10.127	9.885
87	0.305	0.394	0.421	0.484	0.661	1.848	3.513	3.314	3.513	1.848
90	0.073	0.032	0.079	0.080	0.109	0.065	0.127	0.221	0.127	0.065

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	195.099	195.099	195.099	195.099	195.099	195.099	195.099
3	194.726	194.964	194.794	194.618	194.660	194.542	195.394
6	193.760	194.114	194.266	193.747	193.666	193.782	194.563
9	192.541	192.735	192.786	192.220	192.469	192.416	193.394
12	190.556	190.813	190.582	190.249	190.529	190.430	191.420

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CANDELA TABULATION - (Cont.)

15	187.926	188.249	188.081	187.803	187.857	187.910	188.726
18	185.151	185.059	185.086	184.637	184.762	184.781	185.775
21	181.462	181.330	181.623	181.052	180.956	181.063	181.814
24	177.345	177.255	177.240	176.871	176.732	176.716	177.557
27	172.663	172.649	172.606	172.158	172.080	172.095	173.163
30	167.306	167.331	167.387	166.942	166.813	166.604	167.932
33	161.681	161.718	161.685	161.165	161.109	161.132	162.066
36	155.533	155.376	155.527	155.069	155.005	154.883	155.650
39	148.989	148.736	148.911	148.430	148.332	148.315	148.989
42	141.938	141.768	141.809	141.379	141.348	141.189	142.246
45	134.437	134.300	134.426	133.882	133.874	133.570	134.510
48	126.510	126.232	126.419	125.873	125.911	125.631	126.480
51	118.073	117.737	117.989	117.354	117.596	116.992	118.066
54	109.251	108.835	109.132	108.500	108.725	108.264	109.338
57	99.979	99.563	99.878	99.237	99.336	99.108	99.717
60	90.114	89.754	90.115	89.488	89.726	89.199	90.151
63	79.898	79.662	79.993	79.624	79.605	79.212	79.966
66	69.691	69.233	69.604	69.211	69.388	68.864	69.908
69	59.126	58.741	59.108	58.693	58.912	58.339	59.202
72	48.493	47.974	48.530	47.954	48.422	47.804	48.522
75	37.999	37.622	38.028	37.569	37.664	36.912	37.197
78	27.937	27.638	27.485	26.812	26.896	25.624	27.142
81	18.557	17.618	16.081	10.120	7.657	3.023	1.087
84	8.385	2.914	1.060	0.806	0.853	0.502	0.626
87	0.661	0.484	0.421	0.394	0.305	0.207	0.226
90	0.109	0.080	0.079	0.032	0.073	0.104	0.087

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	58.44	N.A.	10.30
0-30	152.53	N.A.	26.90
0-40	240.74	N.A.	42.50
0-60	448.97	N.A.	79.30
0-80	555.54	N.A.	98.10
0-90	566.02	N.A.	100.00
10-90	551.03	N.A.	97.40
20-40	182.30	N.A.	32.20
20-50	275.63	N.A.	48.70
40-70	274.34	N.A.	48.50
60-80	106.57	N.A.	18.80
70-80	40.46	N.A.	7.10
80-90	10.48	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	566.02	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	14.99
10-20	43.45
20-30	94.08
30-40	88.22
40-50	93.33
50-60	114.90
60-70	66.11
70-80	40.46
80-90	10.48
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

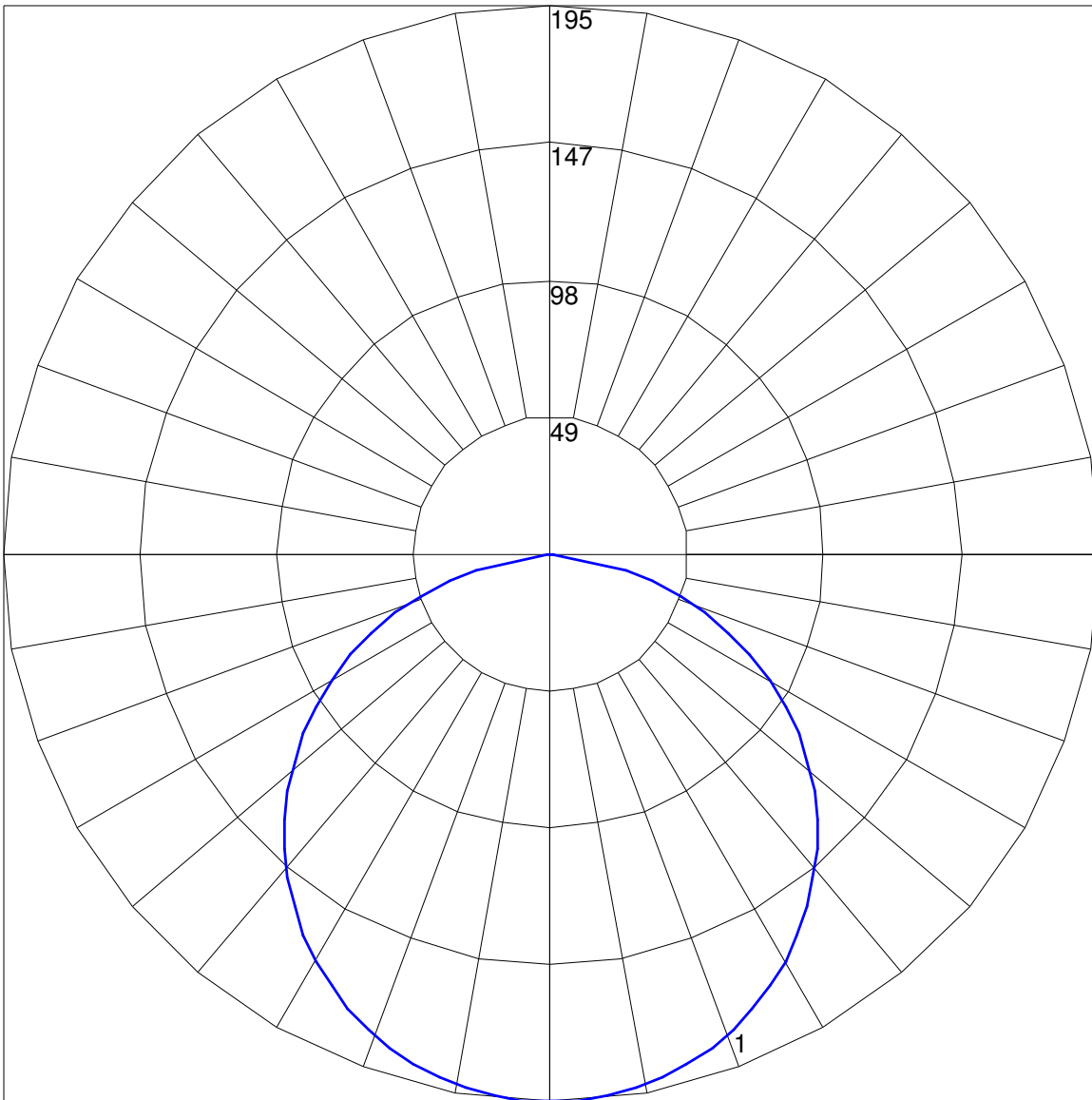
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	98	90	83	77	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	89	79	70	64	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	69	60	53	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	52	46	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42
6	69	55	46	40	40	67	54	46	39	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	45	37	31	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	28	54	41	33	27	40	32	27	39	32	27	38	32	27	25
10	52	38	30	25	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

POLAR GRAPH



Maximum Candela = 195.394 Located At Horizontal Angle = 0, Vertical Angle = 3
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)