



Deliver

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4A_ASD-LVP10M-4N3135-PRM_IES.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]
[TESTLAB] Deliver Co., Ltd.
[TESTDATE] 2018-03-10
[ISSUEDATE] 2018-03-11 15:27:40
[NEARFIELD]
[LAMPPOSITION] 0,0
[OTHER]
[MANUFAC] ASD Lighting Corp
[LUMINAIRE] ASD-LVP10M-4N3135-PRM
[LAMP]

CHARACTERISTICS

Lumens Per Lamp	4218.2 (1 lamp)
Total Lamp Lumens	4218.2
Luminaire Lumens	4225
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	30.2421
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.46
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.16 m
Luminous Width (90-270)	0.21 m
Luminous Height	0.00 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	36767	36839	36571
55	37412	38194	38194
65	37565	40598	41387
75	36083	46529	50201
85	32826	84815	102987

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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	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39
5	1161.92	1162.49	1161.56	1162.44	1162.05	1161.74	1161.64	1161.46	1161.06	1165.23
10	1151.37	1151.57	1150.93	1152.20	1151.53	1151.81	1151.52	1151.32	1150.78	1153.50
15	1134.36	1133.86	1133.83	1133.94	1133.17	1134.28	1133.68	1133.09	1132.04	1133.92
20	1109.28	1109.44	1108.98	1109.45	1108.97	1108.03	1108.06	1107.53	1106.74	1106.80
25	1077.39	1078.23	1077.56	1077.00	1076.49	1074.80	1074.23	1073.66	1073.51	1072.64
30	1037.05	1038.79	1039.20	1037.58	1036.68	1035.04	1033.84	1033.01	1032.59	1030.95
35	991.50	992.34	992.42	991.55	989.70	988.61	987.15	986.39	985.58	982.26
40	936.82	937.07	937.93	937.59	935.92	936.02	934.19	933.36	932.55	928.01
45	873.92	874.90	875.29	876.02	875.87	875.36	875.19	874.07	874.30	869.25
50	801.77	803.89	805.66	806.98	808.50	808.73	810.02	811.03	811.73	805.46
55	721.32	724.75	727.80	731.02	734.85	737.92	740.81	742.94	743.84	736.39
60	631.95	636.74	642.07	648.67	655.65	661.98	666.24	669.91	671.17	663.37
65	533.65	539.63	549.40	560.65	572.01	581.47	588.35	593.47	595.98	587.94
70	426.94	435.38	449.96	468.09	484.35	498.15	508.57	515.83	519.51	511.07
75	313.92	325.70	348.73	373.38	395.47	414.14	428.94	438.80	444.47	436.75
80	199.71	216.42	248.44	281.17	310.50	334.52	353.16	366.10	373.61	366.23
85	96.17	118.45	158.71	198.87	234.33	262.63	284.18	299.08	307.55	301.72
90	29.41	52.52	91.99	133.50	170.55	201.19	224.30	240.19	249.24	244.19
95	17.47	18.61	24.29	46.84	71.56	123.38	158.68	185.06	196.34	155.29
100	10.25	10.70	22.32	37.37	63.71	90.79	59.54	37.55	25.93	64.14
105	5.03	5.33	10.85	19.75	50.44	74.40	98.00	116.15	124.29	123.28
110	2.02	2.40	3.06	16.75	16.37	54.26	74.65	89.33	96.33	95.39
115	1.53	1.89	2.65	7.78	24.59	42.16	2.35	17.56	66.33	45.85
120	1.89	1.92	2.80	4.20	13.02	27.58	39.65	50.01	42.81	55.08
125	2.25	2.19	2.92	4.04	5.88	13.92	24.67	33.01	37.91	37.29
130	2.52	2.35	2.80	3.67	4.59	5.80	11.99	18.51	22.64	22.11
135	2.70	2.37	2.94	3.63	4.32	4.85	5.55	7.66	10.32	10.14
140	2.77	2.43	2.98	3.44	4.04	4.64	5.11	5.67	5.95	6.50
145	2.86	2.49	3.04	3.42	3.81	4.45	4.76	5.14	5.47	5.98
150	2.87	2.69	2.96	3.38	3.55	4.04	4.40	4.64	4.84	5.43
155	2.96	2.85	2.39	3.16	3.55	3.73	4.07	4.11	4.21	4.78
160	2.85	2.93	2.51	2.99	3.32	3.44	3.50	3.68	3.72	4.35
165	2.72	2.86	2.97	2.46	2.97	3.15	3.20	3.31	3.38	3.91
170	2.52	2.58	2.61	2.85	2.48	2.33	2.21	2.62	2.73	2.91
175	2.55	2.62	2.63	2.81	2.89	2.96	2.89	2.92	2.91	3.25
180	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18

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	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39
5	1165.57	1165.39	1165.31	1164.28	1164.86	1163.45	1163.11	1162.60	1162.83	1161.65
10	1154.54	1153.46	1154.39	1153.47	1153.83	1153.31	1152.97	1152.00	1152.35	1150.74
15	1134.69	1133.59	1134.20	1134.57	1134.83	1135.91	1135.95	1134.39	1134.14	1133.05
20	1106.68	1106.84	1106.69	1108.41	1109.18	1110.26	1110.77	1110.06	1108.64	1107.98
25	1072.21	1073.04	1073.47	1075.17	1075.71	1076.47	1077.16	1077.72	1075.98	1075.27
30	1030.68	1031.88	1032.84	1033.88	1034.80	1035.15	1036.32	1037.00	1035.82	1034.41
35	982.28	983.70	984.27	985.08	987.16	986.90	987.39	988.23	987.47	984.76
40	928.72	928.45	928.53	929.14	930.43	931.31	931.14	930.40	929.85	926.91
45	868.86	867.81	867.11	867.10	866.75	867.08	866.20	864.18	862.83	860.82
50	804.72	802.52	801.11	799.35	796.47	795.24	792.08	789.33	787.04	784.76
55	735.59	732.88	729.92	726.20	719.97	714.72	709.55	704.98	701.66	700.43
60	661.86	658.84	654.01	647.39	638.56	628.66	619.26	611.48	606.86	605.98
65	585.60	581.46	574.43	564.24	552.18	537.29	521.69	509.64	502.10	502.80
70	508.48	502.73	492.69	479.33	462.42	441.88	419.49	399.97	389.15	392.57
75	433.63	425.93	412.86	395.25	373.03	346.05	315.58	286.66	271.24	278.46
80	362.52	353.24	338.21	316.78	289.05	255.40	216.39	178.33	156.54	169.81

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CANDELA TABULATION - (Cont.)

85	298.12	287.66	271.08	247.12	215.88	177.94	134.43	89.69	61.57	81.80
90	240.43	229.60	212.13	187.36	152.57	117.03	74.63	37.98	24.11	32.23
95	144.51	123.58	83.92	24.91	15.20	40.26	28.53	17.39	15.58	16.10
100	77.98	109.11	119.13	89.68	63.57	39.20	19.24	9.06	8.65	8.56
105	120.22	112.11	95.43	72.63	48.58	24.24	8.75	4.43	3.92	4.01
110	93.04	85.68	72.00	9.44	34.58	15.55	2.78	2.13	1.72	1.95
115	31.08	1.38	10.45	39.71	23.00	7.11	2.96	2.08	1.80	1.99
120	53.06	47.34	37.81	25.26	11.69	4.70	3.16	2.24	2.19	2.10
125	35.54	30.63	22.66	12.32	5.46	4.31	3.23	2.53	2.51	2.34
130	20.63	16.68	10.62	5.56	4.75	4.05	3.18	2.67	2.76	2.56
135	9.19	6.98	6.04	5.24	4.72	3.94	3.24	2.60	2.88	2.74
140	6.39	6.12	5.56	5.05	4.57	3.80	3.36	2.68	3.05	2.55
145	5.92	5.64	5.25	4.91	4.28	3.90	3.39	2.83	3.13	2.84
150	5.35	5.19	4.89	4.66	4.18	3.94	3.19	3.03	3.20	3.14
155	4.77	4.70	4.68	4.35	4.09	3.83	2.92	3.33	3.38	3.53
160	4.39	4.38	4.23	4.06	3.83	3.56	2.97	3.40	3.34	3.36
165	3.94	3.87	3.83	3.56	3.55	2.90	3.10	3.43	3.13	3.17
170	3.01	2.78	2.74	2.81	2.90	3.13	3.16	2.86	2.79	2.80
175	3.27	3.27	3.24	3.17	3.11	3.04	3.02	2.93	2.97	2.95
180	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18

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	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39
5	1161.83	1160.29	1161.18	1159.56	1159.40	1158.55	1158.38	1164.67	1163.28	1164.19
10	1151.04	1149.01	1149.10	1147.74	1146.61	1145.12	1144.50	1151.05	1150.58	1150.90
15	1132.47	1129.98	1129.02	1127.35	1125.49	1124.05	1122.32	1129.99	1129.80	1129.30
20	1105.81	1104.25	1101.52	1098.85	1096.33	1095.56	1092.92	1101.85	1102.16	1101.13
25	1072.28	1070.08	1066.63	1063.67	1060.15	1059.07	1056.48	1066.82	1065.45	1065.54
30	1030.84	1028.21	1024.46	1021.00	1017.92	1015.62	1013.01	1023.86	1022.22	1023.33
35	981.50	978.58	974.77	971.36	968.28	964.76	963.26	973.24	972.91	974.06
40	924.07	920.47	918.17	915.06	911.49	907.77	906.95	917.50	916.58	917.11
45	857.82	855.20	853.45	850.06	847.64	846.44	845.06	857.25	856.41	856.07
50	783.76	782.09	781.05	780.05	780.00	778.99	778.41	792.15	790.85	789.86
55	700.64	701.28	703.13	705.15	706.75	707.50	707.37	721.27	720.43	719.63
60	608.97	613.82	619.64	625.24	628.86	631.58	632.64	647.02	646.55	644.71
65	509.58	520.98	531.49	541.05	548.16	553.14	555.15	570.34	569.42	566.87
70	406.16	423.97	440.74	454.83	465.81	473.55	477.61	493.08	491.70	487.70
75	301.51	327.20	350.81	370.53	385.89	396.53	403.31	418.75	416.74	410.96
80	202.15	236.51	267.65	292.86	312.16	325.70	334.10	348.53	346.20	339.36
85	121.16	161.26	196.58	225.30	247.21	262.68	272.25	285.05	282.83	274.77
90	57.26	95.20	129.23	164.31	189.20	206.27	216.77	229.40	227.02	218.34
95	25.24	38.15	28.41	7.14	24.82	57.38	84.39	145.32	147.42	136.62
100	15.66	32.82	54.34	78.71	104.24	125.64	121.31	64.46	60.98	69.33
105	5.75	19.92	39.54	62.77	83.70	98.69	105.99	113.36	111.08	104.05
110	2.43	11.03	27.53	8.19	62.79	75.90	82.58	88.90	86.94	80.56
115	2.57	4.37	17.16	31.95	29.64	3.30	14.05	61.10	56.59	13.89
120	2.82	4.01	7.56	19.02	29.66	38.54	43.84	27.62	36.46	42.26
125	2.89	3.77	4.77	8.01	16.55	23.57	28.06	32.24	31.03	26.92
130	3.05	3.77	4.32	5.05	6.74	11.55	15.09	18.23	17.29	14.09
135	3.15	3.50	4.33	4.82	5.58	6.02	6.42	7.43	6.97	6.15
140	3.08	3.65	4.27	4.68	5.22	5.72	5.98	5.65	5.61	5.41
145	3.18	3.77	4.07	4.54	4.95	5.38	5.65	5.18	5.16	5.00
150	3.21	3.66	4.05	4.38	4.39	4.88	5.18	4.68	4.68	4.45
155	2.89	3.50	3.73	4.14	4.44	4.49	4.63	3.92	3.98	3.90
160	3.05	3.29	3.51	3.55	3.83	4.10	4.18	3.62	3.61	3.57
165	3.24	2.77	2.84	3.38	3.50	3.60	3.66	3.19	3.18	3.11
170	2.91	2.96	2.76	2.56	2.42	2.98	3.23	2.84	2.86	2.82
175	2.99	3.04	3.03	3.08	2.96	2.78	2.83	2.72	2.62	2.52

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CANDELA TABULATION - (Cont.)

180 3.18 3.18 3.18 3.18 3.18 3.18 3.18 3.18 3.18 3.18

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	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39	1166.39
5	1162.56	1163.47	1162.62	1162.77	1162.56	1163.09	1161.92
10	1150.17	1150.61	1149.71	1150.93	1151.90	1151.30	1151.37
15	1129.68	1129.76	1130.30	1131.16	1132.92	1132.87	1134.36
20	1102.42	1102.24	1104.09	1105.26	1107.00	1107.80	1109.28
25	1066.75	1067.62	1070.26	1071.79	1074.02	1075.46	1077.39
30	1023.98	1026.58	1028.46	1031.46	1033.58	1036.07	1037.05
35	974.40	977.49	979.13	983.01	986.33	989.28	991.50
40	918.82	920.92	922.84	926.79	930.69	934.55	936.82
45	857.39	858.16	860.31	863.51	867.15	870.69	873.92
50	790.45	790.09	791.47	793.31	795.59	798.67	801.77
55	718.48	717.49	716.76	716.31	717.08	719.00	721.32
60	641.83	639.83	635.99	632.37	630.62	629.59	631.95
65	562.83	557.48	550.59	543.00	536.53	532.15	533.65
70	481.81	473.23	462.33	449.68	437.50	428.20	426.94
75	402.51	389.83	374.15	355.57	336.15	319.07	313.92
80	328.09	311.69	290.30	265.10	236.98	210.46	199.71
85	261.35	242.16	216.57	185.26	149.61	114.80	96.17
90	203.89	182.22	155.57	122.73	85.82	50.86	29.41
95	111.28	76.86	52.71	37.96	21.73	18.41	17.47
100	86.99	86.69	61.57	39.04	21.30	10.52	10.25
105	89.14	69.65	46.31	15.12	10.12	5.23	5.03
110	67.92	52.72	7.94	14.74	2.86	2.31	2.02
115	3.49	29.15	21.74	7.36	2.63	1.80	1.53
120	33.91	23.06	11.67	4.25	2.77	1.91	1.89
125	20.25	11.37	4.94	3.94	2.87	2.15	2.25
130	8.96	5.10	4.25	3.63	2.82	2.38	2.52
135	5.41	4.72	4.09	3.47	2.89	2.52	2.70
140	5.04	4.44	4.01	3.25	2.88	2.55	2.77
145	4.56	4.17	3.68	3.27	2.88	2.30	2.86
150	4.12	3.79	3.57	3.14	2.85	2.47	2.87
155	3.78	3.71	3.32	3.16	2.81	2.86	2.96
160	3.49	3.23	3.15	2.96	2.26	2.99	2.85
165	3.11	3.05	3.03	2.18	2.38	2.85	2.72
170	2.82	2.08	2.07	2.22	2.61	2.61	2.52
175	2.47	2.67	2.86	2.76	2.71	2.59	2.55
180	3.18	3.18	3.18	3.18	3.18	3.18	3.18

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	430.42	10.20	10.20
0-30	924.79	21.90	21.90
0-40	1539.61	36.50	36.40
0-60	2849.81	67.60	67.50
0-80	3791.2	89.90	89.70
0-90	4026.43	95.50	95.30
10-90	3915.83	92.80	92.70
20-40	1109.19	26.30	26.30
20-50	1775.98	42.10	42.00
40-70	1856.7	44.00	43.90
60-80	941.39	22.30	22.30
70-80	394.89	9.40	9.30
80-90	235.23	5.60	5.60
90-110	151.22	3.60	3.60
90-120	175.26	4.20	4.10
90-130	188.26	4.50	4.50
90-150	195.30	4.60	4.60
90-180	198.21	4.70	4.70
110-180	46.99	1.10	1.10
0-180	4224.64	100.20	100.00

Total Luminaire Efficiency = 100.20%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	110.60
10-20	319.81
20-30	494.37
30-40	614.82
40-50	666.79
50-60	643.42
60-70	546.50
70-80	394.89
80-90	235.23
90-100	94.98
100-110	56.24
110-120	24.03
120-130	13.00
130-140	4.41
140-150	2.64
150-160	1.73
160-170	0.90
170-180	0.27

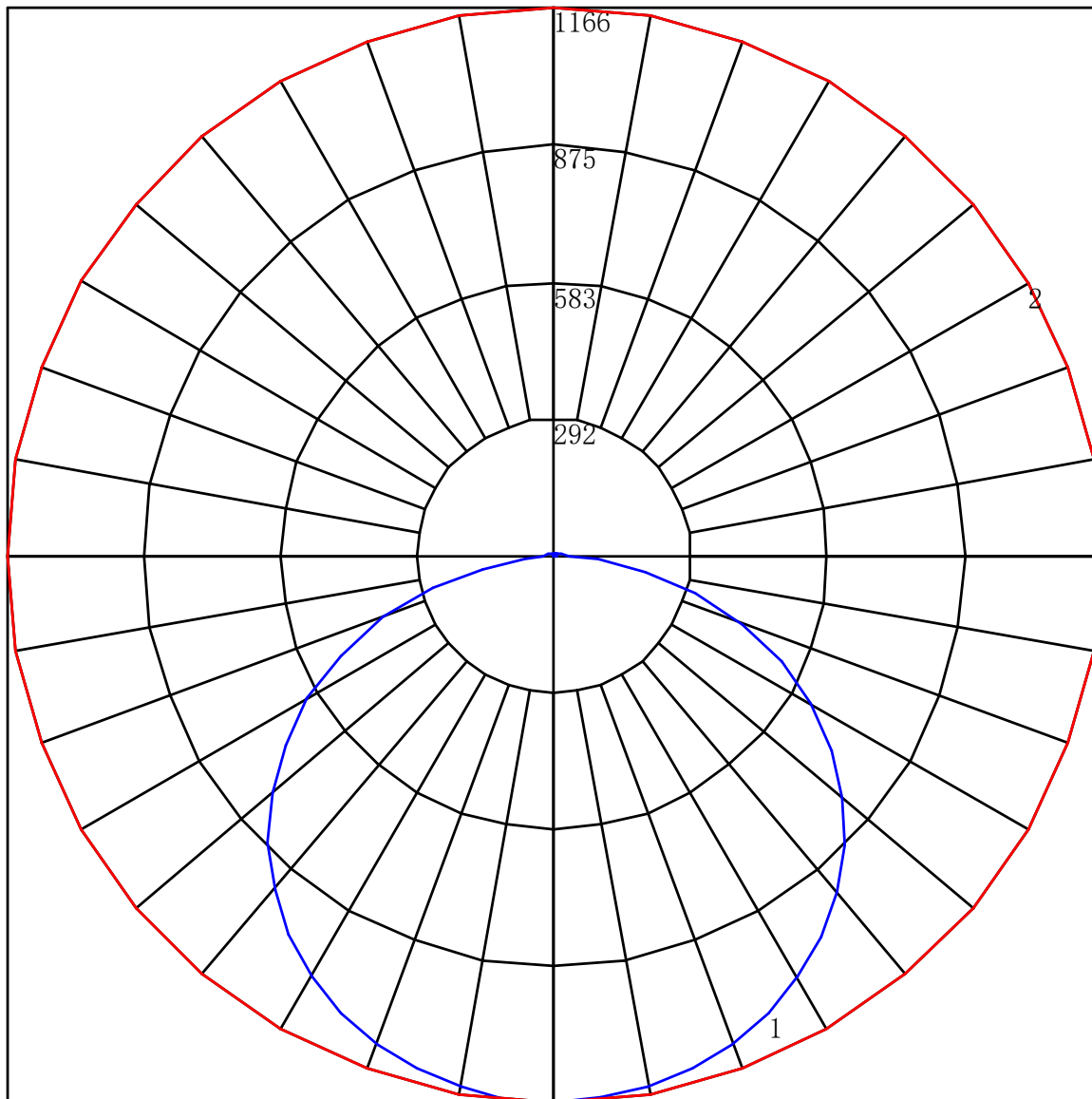
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	95
1	106	100	95	90	102	97	93	88	92	88	85	87	84	81	83	80	78	76
2	95	86	78	72	92	84	77	71	79	73	68	75	70	66	71	67	64	61
3	86	75	66	59	83	73	65	58	69	62	56	66	60	55	62	57	53	51
4	79	66	56	49	76	64	55	49	61	53	47	58	51	46	55	50	45	43
5	72	58	49	42	70	57	48	41	54	46	40	52	45	40	49	43	39	36
6	66	52	43	36	64	51	42	36	49	41	35	47	40	34	45	39	34	32
7	62	47	38	32	59	46	38	31	44	37	31	42	36	30	41	34	30	28
8	57	43	34	28	55	42	34	28	40	33	27	39	32	27	37	31	27	25
9	53	39	31	25	52	39	31	25	37	30	25	36	29	24	34	28	24	22
10	50	36	28	23	48	36	28	23	34	27	22	33	27	22	32	26	22	20

POLAR GRAPH



Maximum Candela = 1166.39 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)