



Deliver

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4A_ASD-LVP10C-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 16:05:37
[NEARFIELD]
[LAMPPOSITION] 0,0
[OTHER]
[MANUFAC] ASD Lighting Corp
[LUMINAIRE] ASD-LVP10C-4N3135-PRM
[LAMP]

CHARACTERISTICS

Lumens Per Lamp	4312 (1 lamp)
Total Lamp Lumens	4312
Luminaire Lumens	4320
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	30.242
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.42
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.32
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	59477	48564	35014
55	63650	35844	32507
65	57921	32662	31525
75	40856	31914	35768
85	28986	67018	166070

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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	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694
5	1625.260	1605.270	1576.750	1554.590	1542.440	1541.310	1545.870	1549.830	1550.960	1561.600
10	1624.150	1576.670	1542.890	1545.710	1540.790	1517.980	1504.330	1504.450	1508.220	1535.470
15	1605.850	1549.370	1535.610	1511.750	1512.130	1566.600	1605.050	1606.890	1602.580	1595.610
20	1580.160	1521.720	1505.970	1513.040	1595.610	1569.200	1446.960	1318.390	1251.540	1192.560
25	1559.030	1504.360	1489.310	1575.570	1441.440	1191.630	1147.520	1277.440	1386.420	1461.290
30	1534.010	1483.660	1521.000	1451.540	1091.080	1211.750	1478.350	1485.060	1429.820	1374.810
35	1494.190	1457.050	1511.780	1088.560	1176.510	1496.670	1336.410	1275.550	1267.940	1257.900
40	1454.290	1425.080	1288.990	977.770	1488.360	1277.710	1188.790	1115.450	1065.640	1017.070
45	1413.690	1372.060	968.040	1233.320	1247.780	1060.850	935.530	879.410	858.110	832.250
50	1354.830	1270.350	845.510	1289.380	949.810	806.510	762.150	737.770	730.980	718.180
55	1227.190	1047.890	918.690	971.280	717.460	664.720	648.420	634.300	631.490	626.740
60	1052.940	826.980	887.720	654.050	570.000	556.330	562.620	554.860	532.760	497.330
65	822.820	672.820	673.320	479.960	464.800	463.180	447.130	441.530	445.900	447.850
70	567.010	515.800	438.750	359.450	362.400	371.470	384.960	388.750	384.530	364.900
75	355.450	343.050	284.470	266.490	274.990	280.310	288.570	297.770	307.380	311.180
80	193.570	195.780	181.080	185.520	201.550	222.970	254.080	295.160	337.030	379.230
85	84.920	95.880	109.190	133.770	169.130	223.550	306.980	406.800	481.520	486.530
90	30.190	44.230	67.100	102.350	160.430	266.020	346.070	366.400	327.870	271.450
95	17.800	15.540	16.210	14.760	57.430	128.030	184.700	192.350	178.330	120.480
100	9.490	7.800	16.540	36.380	74.340	107.080	75.600	37.090	22.190	42.290
105	3.910	2.930	11.130	21.060	52.760	66.600	72.090	72.240	69.410	62.540
110	1.070	1.390	3.900	18.120	11.150	36.440	42.560	44.090	43.230	39.410
115	1.020	1.500	2.860	9.230	19.500	24.590	5.560	12.480	24.150	18.510
120	1.320	1.650	3.040	4.960	11.150	18.020	22.000	24.920	16.400	21.510
125	1.510	1.830	2.930	4.360	6.400	10.490	14.340	16.510	17.060	16.110
130	1.590	1.850	2.650	3.780	4.820	5.710	7.990	10.030	10.880	10.500
135	1.640	1.800	2.460	3.160	3.750	4.140	4.710	5.550	6.270	6.370
140	1.690	1.720	2.180	2.740	3.150	3.560	3.880	4.190	4.290	4.800
145	1.740	1.600	2.070	2.570	2.830	3.290	3.490	3.660	3.800	4.300
150	1.750	1.580	1.970	2.370	2.690	2.900	3.100	3.230	3.300	3.940
155	1.830	1.680	1.920	2.210	2.490	2.690	2.780	2.780	2.890	3.660
160	1.860	1.810	1.750	2.070	2.260	2.420	2.460	2.590	2.650	3.490
165	1.870	1.830	1.720	1.860	2.050	2.120	2.110	2.220	2.280	3.070
170	1.790	1.780	1.800	1.680	1.650	1.810	1.860	1.920	1.950	2.650
175	1.870	1.870	1.880	1.900	1.910	1.890	1.780	1.760	1.800	2.320
180	2.160	2.160	2.160	2.160	2.160	2.160	2.160	2.160	2.160	2.160

Vert. 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	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694
5	1560.310	1558.680	1554.880	1549.390	1544.250	1549.860	1569.600	1601.950	1628.290	1625.440
10	1527.400	1516.550	1502.060	1505.870	1534.910	1552.880	1537.340	1556.480	1613.830	1590.920
15	1592.630	1600.550	1598.790	1573.190	1501.900	1483.300	1535.090	1522.000	1592.720	1536.180
20	1200.180	1254.710	1390.230	1546.660	1578.850	1503.650	1478.220	1512.510	1577.630	1499.620
25	1418.500	1320.450	1166.450	1129.450	1425.810	1569.620	1448.260	1503.880	1553.450	1492.620
30	1390.090	1437.300	1436.460	1231.710	1050.860	1441.420	1502.270	1463.500	1517.270	1477.700
35	1259.970	1261.040	1299.660	1413.710	1190.920	1032.860	1481.800	1400.300	1452.850	1415.440
40	1021.990	1067.670	1172.040	1243.500	1358.470	939.290	1234.970	1352.770	1399.360	1288.040
45	832.190	842.680	880.360	992.060	1184.570	1182.440	893.850	1314.410	1333.300	1068.340
50	714.530	710.520	709.180	735.810	868.550	1146.870	763.420	1195.850	1234.850	812.150
55	617.400	602.920	599.340	602.100	622.620	821.880	826.710	921.130	1086.120	649.200
60	489.180	489.800	500.140	493.960	482.060	531.010	754.600	693.020	903.620	568.120
65	436.390	411.900	385.240	376.130	380.880	376.890	500.260	532.510	646.200	445.170
70	357.380	340.540	319.150	298.570	282.210	269.450	299.830	373.270	399.080	286.750
75	300.810	277.490	247.170	221.490	200.680	189.670	189.310	225.880	225.860	173.740
80	363.160	312.540	246.210	189.930	154.280	132.700	118.270	118.580	110.650	96.870

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CANDELA TABULATION - (Cont.)

85	452.090	393.200	312.080	205.130	134.960	97.190	70.000	52.330	42.190	45.350
90	270.150	277.720	262.100	208.090	121.280	63.190	35.960	22.620	19.350	20.330
95	118.320	95.760	55.040	11.600	13.480	23.680	15.530	11.220	10.010	9.540
100	51.930	77.190	90.310	74.840	51.520	26.480	10.150	5.660	5.240	4.050
105	60.390	58.120	54.190	46.010	32.920	14.100	4.010	2.600	2.730	1.570
110	38.370	36.270	33.060	14.600	18.770	9.110	1.890	1.320	1.240	1.300
115	13.910	2.660	6.270	19.040	11.780	4.330	2.160	1.390	1.330	1.360
120	22.810	21.450	17.690	12.720	7.360	3.760	2.480	1.630	1.600	1.550
125	15.300	13.770	11.070	7.330	4.760	3.540	2.670	1.940	1.890	1.770
130	9.750	8.290	6.200	4.550	3.790	3.360	2.620	2.110	2.090	1.940
135	5.940	5.210	4.560	4.020	3.470	3.040	2.550	2.110	2.200	2.000
140	4.670	4.400	4.130	3.790	3.260	2.800	2.370	1.980	2.210	2.000
145	4.210	4.150	3.890	3.540	3.200	2.850	2.330	1.970	2.210	2.090
150	3.940	3.800	3.570	3.400	3.260	2.840	2.440	2.120	2.320	2.300
155	3.660	3.540	3.490	3.380	3.130	2.810	2.530	2.330	2.420	2.460
160	3.520	3.410	3.320	3.140	2.910	2.720	2.390	2.430	2.440	2.440
165	3.110	3.070	2.960	2.840	2.740	2.580	2.320	2.400	2.350	2.360
170	2.650	2.660	2.600	2.490	2.310	2.260	2.330	2.230	2.210	2.210
175	2.320	2.310	2.300	2.300	2.300	2.270	2.280	2.240	2.250	2.240
180	2.160	2.160	2.160	2.160	2.160	2.160	2.160	2.160	2.160	2.160

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	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694
5	1595.910	1555.710	1525.200	1512.960	1511.140	1515.910	1521.030	1520.020	1520.210	1519.920
10	1522.480	1516.160	1555.890	1572.560	1560.240	1541.400	1531.990	1565.100	1572.620	1584.000
15	1509.340	1549.910	1489.970	1368.350	1231.120	1151.310	1127.430	1163.810	1179.520	1226.900
20	1531.300	1417.640	1164.550	1072.960	1206.690	1349.220	1406.800	1378.700	1346.340	1249.390
25	1471.290	1119.670	1060.180	1364.530	1390.040	1300.140	1244.020	1273.660	1308.420	1386.920
30	1257.960	978.910	1368.010	1263.790	1145.840	1133.650	1146.210	1164.640	1170.530	1162.970
35	956.510	1185.200	1246.260	1098.040	1041.420	952.420	900.820	925.330	941.370	992.580
40	837.260	1264.270	1026.700	892.530	777.790	734.730	721.310	731.740	734.840	756.540
45	917.150	1041.140	776.850	674.800	641.030	624.190	616.160	625.350	630.760	644.720
50	1023.120	756.370	593.790	564.940	537.010	522.860	523.820	539.820	545.500	544.600
55	848.960	518.220	471.670	452.630	448.950	430.020	419.420	433.590	438.160	455.840
60	542.660	384.470	374.810	354.060	339.240	342.590	353.820	370.590	376.410	381.050
65	343.510	285.120	278.820	270.430	273.620	279.050	286.680	298.900	298.140	299.760
70	219.780	207.730	202.780	203.850	219.720	242.880	265.500	273.190	266.520	248.560
75	147.840	147.670	152.950	172.980	215.920	283.430	346.140	350.980	330.880	285.030
80	95.350	106.060	125.020	176.000	288.330	385.250	392.150	406.580	378.400	337.260
85	57.810	75.410	114.090	218.800	240.030	210.080	195.540	220.960	258.310	276.420
90	24.630	44.430	101.160	133.650	137.470	135.960	135.660	143.870	151.060	174.630
95	12.440	21.810	29.350	5.040	0.080	43.240	52.460	69.950	73.100	75.470
100	8.190	20.260	33.750	42.710	48.360	51.930	52.900	42.040	43.700	53.650
105	3.460	11.540	13.200	26.690	30.810	32.820	34.350	37.450	39.270	40.730
110	1.970	6.040	11.600	5.590	14.260	24.580	26.440	28.540	29.270	29.300
115	1.950	2.880	7.140	11.660	14.230	5.210	2.860	4.830	3.630	3.590
120	2.050	2.900	3.870	6.500	9.580	11.810	13.230	12.180	12.450	14.060
125	2.170	2.750	3.450	3.870	5.410	7.290	8.630	9.560	9.390	8.540
130	2.160	2.730	3.180	3.500	4.050	4.610	5.220	5.480	5.430	5.050
135	2.270	2.610	3.030	3.410	3.790	4.100	4.380	4.010	4.110	4.110
140	2.180	2.530	2.940	3.350	3.750	4.060	4.310	3.790	3.820	3.640
145	2.160	2.540	2.900	3.230	3.450	3.770	4.020	3.370	3.340	3.150
150	2.260	2.510	2.810	3.090	3.290	3.410	3.570	2.810	2.830	2.760
155	2.330	2.440	2.660	2.850	3.100	3.280	3.380	2.430	2.480	2.460
160	2.430	2.350	2.520	2.590	2.770	2.910	3.060	2.260	2.240	2.160
165	2.370	2.320	2.280	2.390	2.450	2.580	2.590	1.970	1.960	1.880
170	2.220	2.270	2.280	2.270	2.200	2.200	2.240	1.780	1.790	1.670
175	2.270	2.310	2.280	2.280	2.280	2.210	2.180	2.040	1.970	1.880

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CANDELA TABULATION - (Cont.)

180 2.160 2.160 2.160 2.160 2.160 2.160 2.160 2.160 2.160

**Vert.
Angles**

Horizontal Angles

	300	310	320	330	340	350	360
0	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694	1626.694
5	1524.530	1534.590	1553.300	1578.570	1608.780	1627.420	1625.260
10	1588.440	1576.340	1548.930	1521.260	1540.720	1604.320	1624.150
15	1330.920	1474.130	1576.720	1568.410	1519.270	1552.220	1605.850
20	1139.650	1095.270	1252.320	1533.380	1552.660	1518.640	1580.160
25	1419.890	1236.480	1044.660	1201.130	1561.430	1514.800	1559.030
30	1194.800	1367.860	1248.000	983.080	1367.520	1541.170	1534.010
35	1084.020	1171.180	1337.410	1087.560	1042.810	1537.110	1494.190
40	813.220	939.270	1155.480	1255.230	854.850	1423.340	1454.290
45	659.480	710.320	851.160	1180.630	907.400	1197.570	1413.690
50	550.570	584.020	638.990	892.990	1008.420	953.440	1354.830
55	482.750	495.600	507.820	616.050	918.110	783.640	1227.190
60	382.250	393.280	417.870	453.000	680.380	690.740	1052.940
65	308.480	324.510	330.320	346.310	467.780	582.250	822.820
70	233.190	231.980	244.350	259.130	314.310	427.120	567.010
75	227.980	188.450	175.260	178.030	208.770	279.450	355.450
80	283.940	204.980	150.940	126.830	125.190	156.170	193.570
85	245.490	212.000	145.820	99.080	74.920	74.530	84.920
90	178.660	154.790	114.680	70.780	44.280	29.940	30.190
95	70.420	53.040	6.960	7.890	11.540	12.970	17.800
100	64.560	60.090	43.840	24.690	11.060	6.880	9.490
105	40.800	39.040	29.160	8.800	4.030	3.160	3.910
110	27.820	16.160	7.630	7.870	1.910	1.260	1.070
115	3.070	15.420	10.680	4.300	2.300	1.230	1.020
120	12.360	9.130	5.610	3.780	2.290	1.350	1.320
125	6.890	4.870	4.120	3.200	2.210	1.470	1.510
130	4.440	3.680	3.220	2.750	1.990	1.540	1.590
135	3.710	3.290	2.860	2.300	1.750	1.510	1.640
140	3.330	2.970	2.620	1.990	1.700	1.600	1.690
145	2.870	2.650	2.290	1.930	1.700	1.720	1.740
150	2.590	2.400	2.130	1.890	1.700	1.810	1.750
155	2.330	2.220	2.040	1.860	1.710	1.910	1.830
160	2.080	2.000	1.920	1.860	1.850	1.910	1.860
165	1.880	1.850	1.790	1.780	1.900	1.890	1.870
170	1.660	1.680	1.740	1.810	1.800	1.800	1.790
175	1.870	1.880	1.910	1.870	1.880	1.880	1.870
180	2.160	2.160	2.160	2.160	2.160	2.160	2.160

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	565.77	13.10	13.10
0-30	1193.91	27.70	27.60
0-40	1954.87	45.30	45.20
0-60	3288.32	76.30	76.10
0-80	3982.63	92.40	92.20
0-90	4188.11	97.10	96.90
10-90	4038.86	93.70	93.50
20-40	1389.1	32.20	32.20
20-50	2120.73	49.20	49.10
40-70	1753.59	40.70	40.60
60-80	694.31	16.10	16.10
70-80	274.17	6.40	6.30
80-90	205.48	4.80	4.80
90-110	108.67	2.50	2.50
90-120	119.30	2.80	2.80
90-130	125.46	2.90	2.90
90-150	130.16	3.00	3.00
90-180	132.21	3.10	3.10
110-180	23.54	0.50	0.50
0-180	4320.32	100.20	100.00

Total Luminaire Efficiency = 100.20%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	149.24
10-20	416.53
20-30	628.15
30-40	760.96
40-50	731.63
50-60	601.83
60-70	420.13
70-80	274.17
80-90	205.48
90-100	77.12
100-110	31.55
110-120	10.63
120-130	6.16
130-140	2.85
140-150	1.84
150-160	1.21
160-170	0.65
170-180	0.20

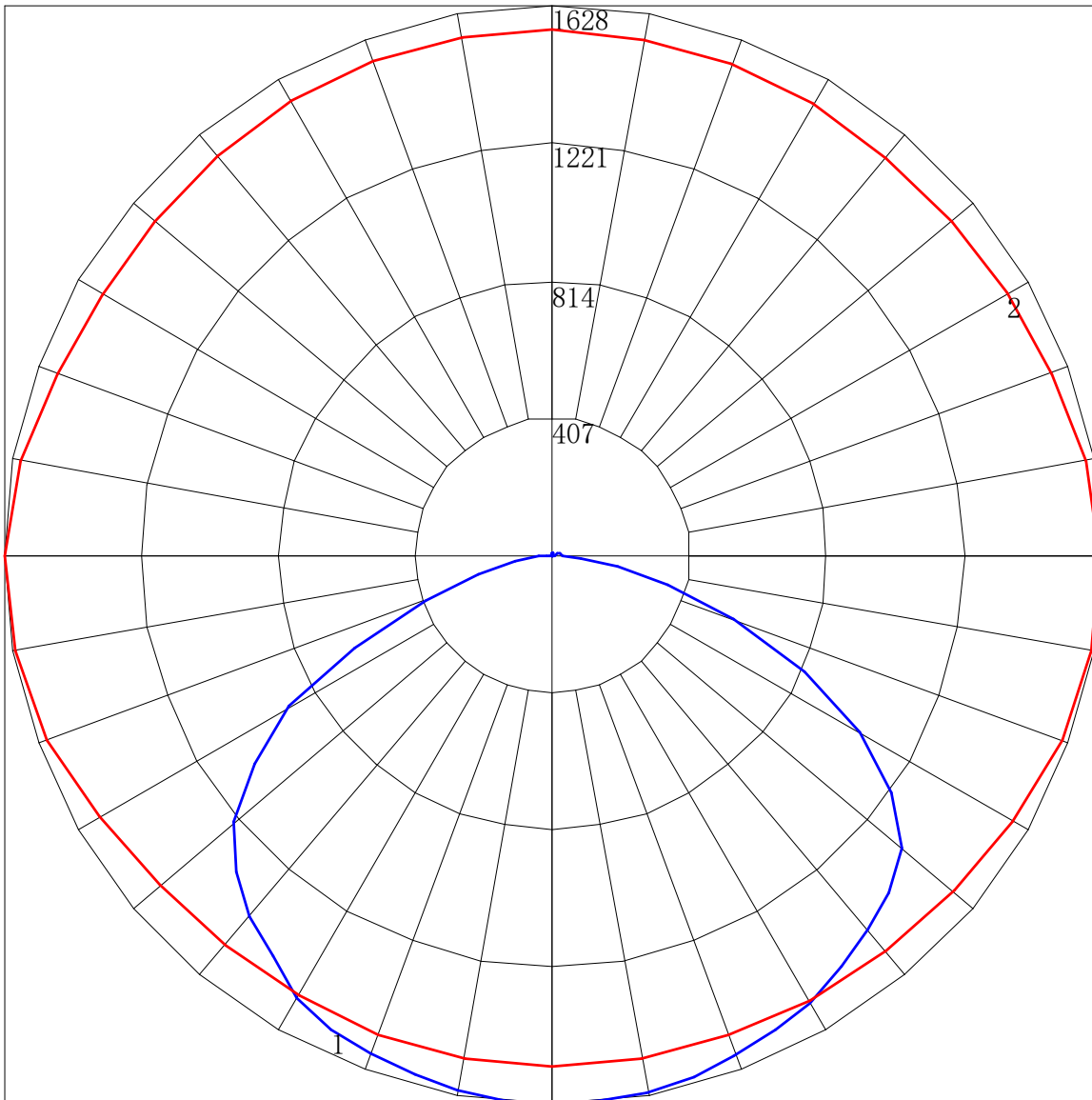
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	115	115	115	115	110	110	110	104	104	104	99	99	99	97
1	107	102	98	94	104	100	96	92	95	91	88	90	88	85	86	84	82	80
2	98	89	82	77	95	87	81	75	83	78	73	79	75	71	76	72	69	67
3	89	79	71	64	87	77	69	63	74	67	62	70	65	60	68	63	59	57
4	82	70	61	55	80	69	60	54	66	59	53	63	57	52	60	55	51	49
5	76	63	54	47	73	62	53	47	59	52	46	57	50	45	55	49	45	42
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	39	37
7	65	52	43	37	63	51	42	37	49	41	36	47	40	36	45	40	35	33
8	61	47	39	33	59	46	38	33	45	37	32	43	37	32	42	36	32	30
9	57	43	35	30	55	43	35	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 1628.29 Located At Horizontal Angle = 180, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)