

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SP-00677\_13 ~ SP8ES-20L35K-DX-AR8WES-SG.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] SP-00677\_13  
[TESTLAB] Spectrum Lighting Photometric Lab, VLS-245-981  
[MANUFAC] Spectrum Lighting  
[ISSUEDATE] 7/27/2018  
[UPDATE] 10/10/2018  
[LUMCAT] SP8ES-20L35K-DX-AR8WES-SG  
[LUMINAIRE] Nom. 8.0" Aperture, LED Wall Wash  
[OTHER] Matte white trim, open aperture  
[OTHER] Peened 'kicker' reflector  
[OTHER] Any flange finish  
[LAMP] N/A  
[LAMPCAT] N/A, 3500K CCT  
[OTHER] Fully regressed lensed, light emitting surface  
[OTHER] Total Luminaire Watts is approximate  
[OTHER] CCT Output Multipliers: 4000K X 1.03, 3000K X 0.985  
[OTHER] This report prepared by Spectrum Lighting

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1767
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	20
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.86
Spacing Criterion (90-270)	0.82
Spacing Criterion (Diagonal)	0.76
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.67 ft (Diameter)
Luminous Width (90-270)	0.67 ft (Diameter)
Luminous Height	0.00 ft

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SP-00677\_13 ~ SP8ES-20L35K-DX-AR8WES-SG.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	32500	16456	2795
55	27791	7333	489
65	14569	1434	280
75	3860	278	185
85	531	386	430

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
<b>0.0</b>	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250
<b>2.5</b>	2141.754	2140.044	2160.299	2165.042	2177.532	2199.333	2201.318	2189.966	2165.161	2159.146
<b>5.0</b>	2109.183	2106.495	2130.970	2137.092	2161.059	2189.277	2177.120	2176.497	2135.783	2145.037
<b>7.5</b>	2054.325	2047.113	2080.485	2084.431	2111.468	2149.513	2132.609	2105.035	2050.541	2055.685
<b>10.0</b>	1992.045	1975.148	2016.955	2015.432	2055.189	2100.044	2035.172	2001.442	1925.313	1957.268
<b>12.5</b>	1882.729	1865.928	1914.958	1920.237	1951.791	2001.063	1912.342	1830.817	1738.784	1770.189
<b>15.0</b>	1761.457	1745.830	1793.953	1798.378	1841.699	1889.497	1730.722	1630.161	1517.720	1577.412
<b>17.5</b>	1626.780	1600.301	1641.381	1640.837	1677.847	1718.215	1526.967	1382.184	1253.043	1319.062
<b>20.0</b>	1489.701	1467.213	1476.530	1477.055	1509.716	1536.232	1292.537	1117.694	993.820	1060.540
<b>22.5</b>	1402.903	1357.197	1331.297	1306.469	1326.229	1333.311	1049.312	869.595	740.217	814.077
<b>25.0</b>	1322.220	1269.633	1192.137	1151.468	1143.013	1127.938	832.221	625.895	530.065	573.888
<b>27.5</b>	1281.031	1216.107	1095.280	1010.540	989.958	950.416	620.838	443.254	356.965	401.609
<b>30.0</b>	1242.262	1155.955	1008.074	874.442	837.221	774.600	457.291	272.627	237.352	242.381
<b>32.5</b>	1171.824	1087.525	908.959	741.949	688.623	625.942	300.801	184.283	155.391	166.584
<b>35.0</b>	1100.261	1004.927	807.985	600.725	540.553	478.434	203.083	106.498	103.851	99.165
<b>37.5</b>	1004.912	907.893	695.602	454.225	396.417	353.851	110.327	76.517	69.606	70.213
<b>40.0</b>	910.768	818.893	582.071	316.596	258.704	232.600	71.642	49.947	48.997	45.251
<b>42.5</b>	829.218	736.769	481.343	183.327	153.383	146.205	35.346	37.240	34.771	33.682
<b>45.0</b>	753.425	681.542	381.483	104.781	64.784	67.973	27.264	25.059	25.738	23.906
<b>47.5</b>	713.609	645.039	314.050	47.769	36.809	40.745	19.416	20.659	18.607	18.734
<b>50.0</b>	668.131	592.192	247.253	27.073	15.340	17.814	15.030	16.259	13.515	14.139
<b>52.5</b>	597.122	530.160	191.707	17.329	12.072	13.802	10.822	11.855	8.989	10.750
<b>55.0</b>	522.605	454.146	137.887	12.538	9.203	10.165	8.052	7.853	7.111	8.125
<b>57.5</b>	436.491	371.666	98.912	8.868	7.222	7.763	5.561	6.658	5.790	6.778
<b>60.0</b>	352.510	291.944	62.383	7.313	5.639	5.893	4.523	5.503	5.012	5.404
<b>62.5</b>	273.938	213.219	39.574	6.093	4.761	5.374	3.622	4.541	4.312	3.994
<b>65.0</b>	201.855	151.644	19.874	4.436	3.886	4.613	3.245	3.697	3.914	3.173
<b>67.5</b>	142.570	94.693	11.768	2.772	3.016	3.381	2.856	3.250	3.525	3.001
<b>70.0</b>	94.091	58.678	5.835	2.371	2.425	2.711	2.441	2.908	2.732	2.601
<b>72.5</b>	56.820	28.531	3.515	1.990	2.051	2.624	2.017	2.727	2.001	2.061
<b>75.0</b>	32.755	13.833	2.358	1.657	1.574	1.860	1.587	1.910	1.412	1.699
<b>77.5</b>	15.371	6.141	1.791	1.543	1.283	1.214	1.421	1.171	1.334	1.401
<b>80.0</b>	5.916	2.980	1.630	1.318	1.347	1.112	1.084	1.355	1.227	1.205
<b>82.5</b>	2.978	1.946	1.473	0.901	1.916	1.112	0.994	1.279	1.070	1.301
<b>85.0</b>	1.516	1.281	1.104	0.857	1.230	0.748	1.280	1.118	1.479	0.839
<b>87.5</b>	1.131	1.556	1.284	0.998	1.067	1.001	1.011	1.442	1.012	1.247
<b>90.0</b>	0.444	1.236	0.425	0.690	1.230	0.655	0.923	0.518	1.105	0.390

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

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
<b>0.0</b>	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250	2181.250
<b>2.5</b>	2174.131	2172.079	2168.031	2171.074	2165.960	2156.691	2141.754
<b>5.0</b>	2143.232	2154.011	2138.482	2128.726	2121.969	2113.430	2109.183
<b>7.5</b>	2080.620	2098.148	2078.577	2058.025	2059.761	2053.557	2054.325
<b>10.0</b>	1975.598	2030.407	2001.853	1969.653	1976.946	1966.963	1992.045
<b>12.5</b>	1831.869	1913.762	1888.205	1853.783	1864.484	1853.427	1882.729
<b>15.0</b>	1645.191	1785.763	1756.786	1713.305	1723.851	1718.361	1761.457
<b>17.5</b>	1426.108	1604.110	1594.268	1541.747	1569.099	1565.581	1626.780
<b>20.0</b>	1191.881	1413.886	1426.164	1373.707	1403.408	1434.534	1489.701
<b>22.5</b>	948.398	1210.486	1250.165	1209.289	1262.495	1318.017	1402.903

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25.0	728.173	1005.716	1086.629	1062.954	1137.384	1240.219	1322.220
27.5	519.519	828.703	937.849	932.261	1034.392	1183.928	1281.031
30.0	359.390	653.067	786.973	794.741	942.910	1117.728	1242.262
32.5	218.609	508.837	634.074	652.415	837.404	1047.149	1171.824
35.0	134.548	366.377	483.714	506.822	726.126	954.233	1100.261
37.5	67.849	256.968	335.355	359.371	608.011	853.643	1004.912
40.0	43.763	152.486	214.208	235.807	487.684	764.070	910.768
42.5	29.493	91.619	110.985	123.423	385.816	677.464	829.218
45.0	22.019	37.909	56.298	70.022	288.484	629.567	753.425
47.5	15.651	25.197	27.338	38.234	227.613	589.124	713.609
50.0	12.973	14.314	15.870	25.521	173.007	531.249	668.131
52.5	10.657	10.944	11.874	18.221	130.379	471.203	597.122
55.0	8.365	8.057	8.982	13.207	89.075	398.635	522.605
57.5	6.080	6.647	6.462	8.674	63.590	325.164	436.491
60.0	4.848	5.358	5.147	6.598	38.979	261.496	352.510
62.5	3.678	4.361	4.135	4.867	24.974	198.378	273.938
65.0	3.562	3.369	3.255	3.757	11.606	147.279	201.855
67.5	3.352	2.388	2.398	2.723	7.491	98.398	142.570
70.0	2.636	1.826	1.768	2.346	4.048	63.591	94.091
72.5	1.997	1.677	1.296	2.060	2.784	35.621	56.820
75.0	1.467	1.329	1.288	1.976	1.977	17.926	32.755
77.5	1.411	1.171	1.119	1.512	1.563	8.688	15.371
80.0	1.319	1.463	0.982	1.195	1.676	3.850	5.916
82.5	1.194	1.564	1.075	1.327	1.275	2.312	2.978
85.0	1.076	0.971	1.261	1.379	0.932	1.290	1.516
87.5	0.973	1.104	1.091	0.858	1.155	1.251	1.131
90.0	0.786	0.505	0.949	0.680	0.448	0.717	0.444

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Zone	Lumens	%Lamp	%Fixt
0-20	673.75	N.A.	38.10
0-30	1137.45	N.A.	64.40
0-40	1458.93	N.A.	82.60
0-60	1721.67	N.A.	97.40
0-80	1765.89	N.A.	99.90
0-90	1767.27	N.A.	100.00
10-90	1567.5	N.A.	88.70
20-40	785.18	N.A.	44.40
20-50	952.36	N.A.	53.90
40-70	299.97	N.A.	17.00
60-80	44.22	N.A.	2.50
70-80	6.99	N.A.	0.40
80-90	1.38	N.A.	0.10
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	1767.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	199.76
10-20	473.99
20-30	463.70
30-40	321.48
40-50	167.18
50-60	95.56
60-70	37.23
70-80	6.99
80-90	1.38
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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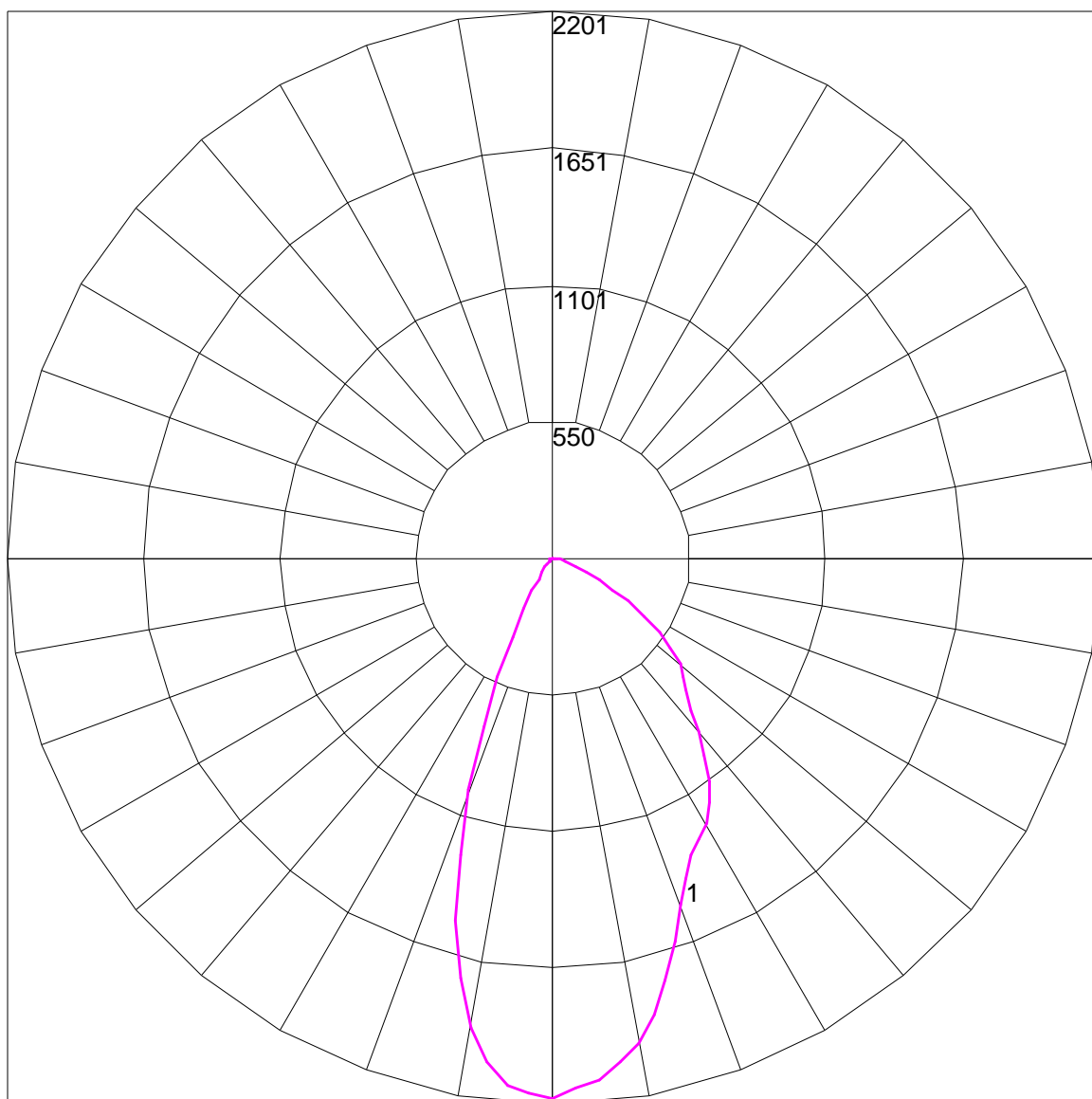
## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	111	108	105	103	104	102	100	100	99	97	97	95	94	92
2	107	102	97	94	105	100	96	92	97	93	90	94	91	88	91	89	87	85
3	101	94	89	84	99	93	88	84	90	86	82	87	84	81	85	82	80	78
4	95	87	81	77	93	86	81	76	84	79	75	82	78	74	80	76	74	72
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	67
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62
7	81	71	65	60	80	71	64	60	69	64	60	68	63	60	67	62	59	58
8	77	67	61	56	76	66	60	56	65	60	56	64	59	56	63	59	55	54
9	73	63	57	53	72	63	57	53	62	56	53	61	56	52	60	55	52	51
10	70	60	54	50	69	59	53	50	58	53	49	58	53	49	57	52	49	48

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POLAR GRAPH



Maximum Candela = 2201.318 Located At Horizontal Angle = 135, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180)