



IES INDOOR REPORT
PHOTOMETRIC FILENAME : NLSD48HB40.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 8,389P26
 [TESTLAB] CSA Group
 [ISSUEDATE] 11/30/2015 01:11:31 PM
 [MANUFAC] LAMAR LIGHTING CO., INC.
 [LUMINAIRE] NLSD48HB40/NLWD48HB40
 [AMBIENT] 24.6 deg C
 [POWERFACTOR] 0.9973
 [ATHD] 5.35%
 [CURRENT] 0.4302
 [VOLTAGE] 120.00
 [STABILIZATION] 23:22.1 Stable
 [POWER VARIATION] 0.36 %
 [LIGHT VARIATION] 0.40 %
 [Lumens] 4,614

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4614
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	51.62
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.16 ft
Luminous Width (90-270)	3.75 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	27958	26558	25093
55	25433	24146	22853
65	22486	21565	20565
75	18355	18220	17823
85	9839	13943	15921

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>
0.0	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412
2.5	1915.045	1916.109	1915.722	1919.133	1922.364	1926.934	1922.405	1919.271	1917.627	1913.526
5.0	1907.230	1906.857	1906.402	1908.721	1911.676	1914.424	1910.461	1905.946	1902.811	1899.000
7.5	1893.201	1891.365	1891.213	1891.848	1893.684	1894.830	1889.086	1882.762	1879.393	1875.679
10.0	1873.635	1870.266	1869.120	1868.830	1868.954	1867.822	1860.269	1853.324	1849.154	1845.853
12.5	1847.676	1844.335	1840.841	1839.557	1838.521	1835.539	1826.274	1816.926	1812.383	1808.006
15.0	1815.062	1811.347	1807.260	1805.147	1800.425	1795.565	1785.816	1774.577	1768.266	1764.221
17.5	1777.462	1773.500	1767.728	1764.193	1757.979	1749.943	1737.682	1725.392	1718.709	1713.435
20.0	1735.638	1731.275	1722.824	1716.721	1710.300	1700.207	1684.327	1672.922	1663.491	1657.913
22.5	1686.123	1683.458	1674.759	1665.659	1657.802	1644.685	1628.253	1614.445	1604.379	1598.925
25.0	1632.465	1630.462	1621.432	1611.007	1599.118	1585.490	1567.981	1552.779	1543.265	1535.312
27.5	1576.749	1574.402	1563.425	1551.950	1540.407	1522.139	1504.437	1488.088	1477.069	1470.704
30.0	1516.657	1514.710	1502.352	1490.449	1475.840	1457.006	1436.695	1420.001	1410.611	1402.520
32.5	1451.994	1450.254	1438.103	1425.579	1409.811	1389.637	1368.318	1350.699	1341.958	1334.391
35.0	1385.412	1385.633	1369.464	1358.997	1341.185	1320.625	1298.421	1282.073	1272.269	1265.917
37.5	1316.579	1316.524	1302.978	1290.551	1270.087	1249.127	1230.086	1213.337	1204.085	1197.789
40.0	1249.721	1248.078	1233.482	1220.323	1200.578	1180.018	1159.292	1142.916	1133.941	1127.934
42.5	1177.615	1176.497	1161.639	1148.632	1128.997	1109.404	1088.802	1074.290	1064.528	1058.052
45.0	1103.011	1103.977	1090.183	1077.093	1057.845	1037.671	1017.940	1005.747	996.178	989.992
47.5	1032.521	1030.077	1018.354	1005.126	988.031	969.335	951.426	938.778	929.251	921.339
50.0	959.987	958.303	948.554	933.642	917.459	899.771	884.720	871.865	861.495	856.690
52.5	887.937	886.819	879.404	864.215	848.999	832.526	817.931	805.683	796.804	792.703
55.0	813.899	814.009	807.809	795.548	781.201	764.218	751.376	741.172	733.716	731.355
57.5	742.139	742.815	736.850	725.956	713.197	699.044	685.360	677.434	670.641	667.216
60.0	670.627	671.414	664.717	658.642	643.908	632.061	622.313	614.553	608.795	605.716
62.5	601.035	602.001	596.229	589.450	576.594	566.998	559.058	553.701	548.909	545.540
65.0	530.200	533.776	528.197	522.080	512.456	504.531	497.392	492.642	490.736	484.923
67.5	461.394	465.316	462.057	454.877	448.705	441.676	436.195	432.094	433.254	426.419
70.0	395.254	397.104	394.439	390.352	385.768	380.700	377.221	373.106	375.771	367.196
72.5	329.252	331.282	329.583	325.261	321.947	320.000	318.661	315.927	318.288	311.909
75.0	265.058	267.281	266.149	264.188	262.835	263.374	262.034	260.681	260.806	257.367
77.5	202.094	205.284	206.540	206.858	208.446	208.708	208.321	208.611	208.197	207.148
80.0	145.743	148.353	149.541	152.302	154.346	157.591	159.027	159.565	159.924	159.303
82.5	93.301	94.516	98.037	103.809	106.971	110.809	113.170	115.683	116.305	116.222
85.0	47.845	49.433	55.108	60.369	64.994	70.614	73.679	76.358	76.993	77.421
87.5	13.573	16.155	21.969	27.202	32.849	37.226	42.128	44.558	45.801	46.409
90.0	0.083	2.499	6.904	12.206	17.011	21.458	25.641	28.016	30.336	30.847

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>
0.0	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412
2.5	1912.146	1905.214	1902.245	1893.477	1892.718	1901.320	1907.893	1916.067	1914.065	1914.120
5.0	1895.976	1891.309	1888.354	1880.222	1880.001	1887.885	1896.474	1905.076	1905.228	1905.753
7.5	1872.751	1868.830	1865.060	1859.082	1859.068	1868.278	1878.123	1886.877	1891.627	1890.398
10.0	1840.910	1839.253	1835.829	1830.513	1832.860	1840.758	1853.904	1863.693	1870.722	1869.576
12.5	1803.297	1802.607	1799.845	1795.592	1800.094	1809.083	1824.009	1835.042	1842.098	1841.766
15.0	1760.202	1758.891	1758.670	1756.046	1761.348	1774.342	1787.363	1799.155	1808.572	1807.578
17.5	1710.342	1709.458	1710.659	1709.624	1716.928	1730.999	1747.651	1759.098	1770.669	1770.020
20.0	1656.491	1656.794	1658.631	1658.921	1667.675	1683.209	1700.952	1713.946	1729.231	1727.187
22.5	1596.495	1596.081	1601.590	1602.515	1616.199	1631.111	1650.636	1664.872	1682.422	1679.370
25.0	1534.883	1535.063	1541.815	1545.654	1558.495	1577.895	1595.749	1610.717	1629.662	1628.571
27.5	1470.842	1470.483	1478.409	1483.904	1497.367	1516.160	1539.772	1550.749	1572.248	1571.088
30.0	1402.893	1404.232	1411.951	1419.200	1433.657	1453.982	1476.862	1489.303	1511.990	1512.211

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CANDELA TABULATION - (Cont.)

32.5	1331.961	1336.587	1343.477	1352.052	1367.503	1389.126	1412.227	1424.930	1448.942	1449.992
35.0	1262.700	1268.527	1275.348	1284.945	1300.962	1322.516	1346.101	1358.003	1384.777	1385.895
37.5	1195.414	1198.548	1207.441	1218.722	1233.234	1254.333	1274.768	1289.847	1316.441	1314.936
40.0	1126.429	1128.721	1138.994	1149.792	1164.387	1184.091	1205.797	1219.882	1246.034	1244.846
42.5	1057.679	1059.322	1069.430	1080.531	1093.193	1114.057	1133.706	1149.212	1175.737	1172.907
45.0	988.598	991.318	999.672	1010.055	1023.104	1043.954	1062.098	1077.977	1104.723	1102.168
47.5	922.554	925.136	933.062	943.984	953.774	976.032	990.724	1004.932	1034.702	1031.568
50.0	855.599	859.230	868.109	876.477	885.825	904.797	921.159	932.164	962.500	958.703
52.5	793.546	794.609	801.734	810.820	819.933	835.370	850.573	863.193	888.904	886.059
55.0	726.563	732.128	737.030	744.320	753.641	767.573	780.401	791.903	816.716	814.230
57.5	665.256	669.219	672.546	681.452	689.489	701.101	712.051	720.902	748.615	745.411
60.0	603.769	606.337	610.383	617.977	624.122	634.989	643.080	651.213	678.525	675.294
62.5	544.063	544.077	548.012	553.411	559.445	567.923	575.642	582.490	608.712	607.083
65.0	484.578	484.550	487.850	492.683	496.619	503.592	509.681	513.616	538.471	536.606
67.5	425.314	424.568	425.507	431.307	434.248	438.584	443.154	447.807	469.721	468.423
70.0	367.141	366.520	367.293	369.930	370.759	376.710	378.146	380.107	403.649	402.669
72.5	311.080	309.658	310.266	310.570	310.570	312.254	314.933	314.118	336.860	338.683
75.0	257.740	255.130	254.426	254.109	252.162	251.996	252.894	252.935	275.124	274.959
77.5	205.007	204.745	201.887	199.236	198.310	195.687	194.817	194.375	212.201	212.726
80.0	156.997	156.238	153.062	149.389	145.799	143.327	140.869	138.853	155.133	155.754
82.5	114.938	112.135	109.014	105.631	100.481	96.131	92.003	88.150	102.193	104.112
85.0	76.510	73.072	70.959	65.671	60.686	55.329	49.930	45.580	56.419	59.140
87.5	45.276	42.653	39.574	35.128	29.646	24.661	18.655	14.291	20.698	23.405
90.0	29.950	27.975	28.016	21.154	16.942	11.751	7.249	2.789	1.298	4.253

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>
0.0	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412
2.5	1914.010	1918.939	1922.502	1927.100	1922.364	1920.016	1919.671	1916.702	1914.742	1909.218
5.0	1904.593	1908.956	1912.988	1917.006	1912.643	1908.956	1909.287	1906.498	1905.186	1900.064
7.5	1890.039	1894.085	1898.117	1900.630	1895.300	1891.088	1892.014	1889.418	1888.382	1883.149
10.0	1868.982	1870.874	1874.961	1874.809	1870.031	1864.522	1863.652	1864.177	1861.277	1844.127
12.5	1839.806	1841.090	1842.084	1842.139	1836.160	1828.276	1827.682	1826.205	1824.865	1804.374
15.0	1806.059	1804.664	1804.209	1800.467	1793.535	1785.637	1782.157	1782.433	1779.547	1764.607
17.5	1766.996	1764.483	1762.122	1755.577	1746.961	1736.770	1734.906	1732.586	1731.827	1724.854
20.0	1723.542	1719.842	1714.263	1706.103	1695.678	1684.714	1680.475	1678.611	1678.141	1683.209
22.5	1674.289	1669.277	1660.868	1650.843	1639.134	1625.878	1621.708	1619.154	1620.438	1624.843
25.0	1619.223	1612.733	1602.598	1590.336	1575.010	1563.342	1557.321	1553.939	1556.148	1560.884
27.5	1560.249	1551.854	1539.772	1524.555	1508.082	1494.108	1488.930	1483.946	1488.351	1492.217
30.0	1498.320	1490.560	1476.531	1458.677	1438.145	1425.593	1420.319	1415.651	1420.843	1424.226
32.5	1435.052	1425.745	1411.053	1390.659	1369.629	1356.802	1350.422	1346.763	1352.549	1357.837
35.0	1366.882	1357.865	1341.295	1323.511	1301.321	1287.030	1280.540	1276.080	1283.067	1289.778
37.5	1298.905	1287.789	1270.930	1249.044	1227.918	1214.137	1207.565	1205.024	1209.816	1219.923
40.0	1227.034	1218.943	1199.183	1176.842	1153.410	1140.403	1136.702	1132.104	1137.986	1146.464
42.5	1156.945	1147.887	1127.106	1104.433	1085.350	1069.002	1064.417	1063.326	1066.530	1077.148
45.0	1086.786	1077.811	1056.533	1033.750	1017.415	1003.124	996.302	995.667	998.567	1009.392
47.5	1016.393	1005.374	986.899	965.303	951.316	937.080	929.334	932.206	931.543	943.307
50.0	946.939	932.634	915.539	894.703	883.104	870.608	863.207	863.828	865.748	875.745
52.5	875.082	861.868	844.732	825.152	814.299	804.012	797.329	796.597	799.621	808.099
55.0	804.799	792.151	775.872	756.457	747.013	739.087	732.722	733.550	735.856	742.373
57.5	735.014	723.415	708.627	694.805	685.816	677.766	673.623	672.588	676.965	681.922
60.0	668.238	656.363	643.605	631.233	623.031	618.985	615.464	614.042	616.969	622.837
62.5	598.632	589.325	578.003	569.138	561.654	558.396	556.904	554.419	559.542	561.999
65.0	530.172	522.467	513.409	507.057	500.084	498.275	496.743	494.368	498.952	501.755
67.5	462.181	457.335	449.961	444.410	439.591	438.169	437.631	436.706	440.020	442.850

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CANDELA TABULATION - (Cont.)

70.0	398.292	393.804	388.309	384.843	382.482	380.618	381.225	381.943	383.255	386.804
72.5	334.706	332.538	328.534	327.816	326.407	325.289	326.697	327.995	329.086	331.516
75.0	271.590	271.451	270.927	271.990	271.755	272.363	273.840	274.075	275.870	277.127
77.5	212.864	213.126	214.839	216.882	219.216	220.472	221.798	224.421	225.084	225.747
80.0	155.837	160.007	163.100	167.049	170.819	171.992	174.243	176.038	177.074	176.591
82.5	106.432	112.535	117.188	120.765	125.625	128.414	130.541	132.695	132.916	131.784
85.0	64.207	70.283	75.820	80.183	86.341	90.125	92.155	93.342	94.005	92.403
87.5	29.218	35.680	41.935	48.231	53.050	57.566	60.148	61.059	61.183	59.112
90.0	10.273	16.169	23.280	28.900	33.747	36.936	39.933	41.051	40.637	39.339

Vert. Angles **Horizontal Angles**

	<u>300</u>	<u>310</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>
0.0	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412	1916.412
2.5	1906.043	1898.006	1897.371	1905.435	1911.911	1918.815	1915.045
5.0	1896.998	1890.122	1890.743	1898.407	1905.283	1912.008	1907.230
7.5	1880.746	1875.651	1878.523	1886.463	1894.292	1900.851	1893.201
10.0	1857.176	1855.933	1857.866	1866.538	1876.217	1882.417	1873.635
12.5	1823.954	1824.120	1827.903	1838.397	1849.954	1858.087	1847.676
15.0	1783.966	1785.775	1791.878	1804.209	1817.050	1826.826	1815.062
17.5	1739.297	1742.432	1750.896	1764.704	1779.906	1790.677	1777.462
20.0	1690.845	1694.476	1706.047	1720.781	1738.400	1750.274	1735.638
22.5	1635.254	1641.813	1654.240	1672.508	1690.431	1703.659	1686.123
25.0	1573.035	1581.720	1598.110	1617.897	1638.540	1651.023	1632.465
27.5	1507.226	1517.596	1536.209	1557.680	1580.215	1593.816	1576.749
30.0	1440.492	1452.215	1474.487	1497.422	1520.758	1533.061	1516.657
32.5	1373.206	1387.897	1408.485	1434.278	1457.089	1470.083	1451.994
35.0	1301.680	1321.840	1342.386	1368.939	1392.689	1406.511	1385.412
37.5	1232.226	1250.356	1272.380	1300.755	1323.455	1339.072	1316.579
40.0	1159.444	1178.389	1200.771	1228.097	1251.999	1268.776	1249.721
42.5	1089.272	1108.727	1130.364	1156.696	1181.150	1197.347	1177.615
45.0	1021.281	1042.449	1061.600	1087.932	1110.315	1124.952	1103.011
47.5	953.705	975.149	992.933	1018.727	1041.192	1055.152	1032.521
50.0	886.570	904.576	921.132	946.069	967.237	980.617	959.987
52.5	818.373	834.707	851.401	874.281	895.421	907.641	887.937
55.0	754.138	767.780	782.693	803.653	822.059	835.163	813.899
57.5	691.698	703.559	717.008	735.345	753.889	765.267	742.139
60.0	632.310	640.332	652.856	669.578	683.330	696.503	670.627
62.5	570.850	577.202	587.917	601.891	615.685	624.771	601.035
65.0	509.419	512.677	522.923	533.458	546.203	553.383	530.200
67.5	447.876	450.928	458.025	467.663	477.743	482.562	461.394
70.0	388.930	393.459	399.258	404.574	413.053	416.021	395.254
72.5	331.737	335.493	338.614	342.687	347.865	350.240	329.252
75.0	277.651	279.156	280.813	283.464	285.770	286.116	265.058
77.5	224.946	225.526	224.767	224.877	224.366	224.504	202.094
80.0	174.851	174.464	171.744	169.189	167.836	165.392	145.743
82.5	128.939	127.544	123.623	119.895	115.490	112.811	93.301
85.0	90.194	86.452	80.901	75.336	70.186	66.596	47.845
87.5	57.455	51.656	47.251	40.029	33.622	29.107	13.573
90.0	35.721	31.399	26.442	19.525	13.131	6.642	0.083

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	684.00	N.A.	14.80
0-30	1413.44	N.A.	30.60
0-40	2241.82	N.A.	48.60
0-60	3738.15	N.A.	81.00
0-80	4528.56	N.A.	98.20
0-90	4613.89	N.A.	100.00
10-90	4433.62	N.A.	96.10
20-40	1557.82	N.A.	33.80
20-50	2364.35	N.A.	51.20
40-70	2002.39	N.A.	43.40
60-80	790.40	N.A.	17.10
70-80	284.34	N.A.	6.20
80-90	85.33	N.A.	1.80
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	4613.89	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	180.26
10-20	503.74
20-30	729.44
30-40	828.38
40-50	806.53
50-60	689.80
60-70	506.06
70-80	284.34
80-90	85.33
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

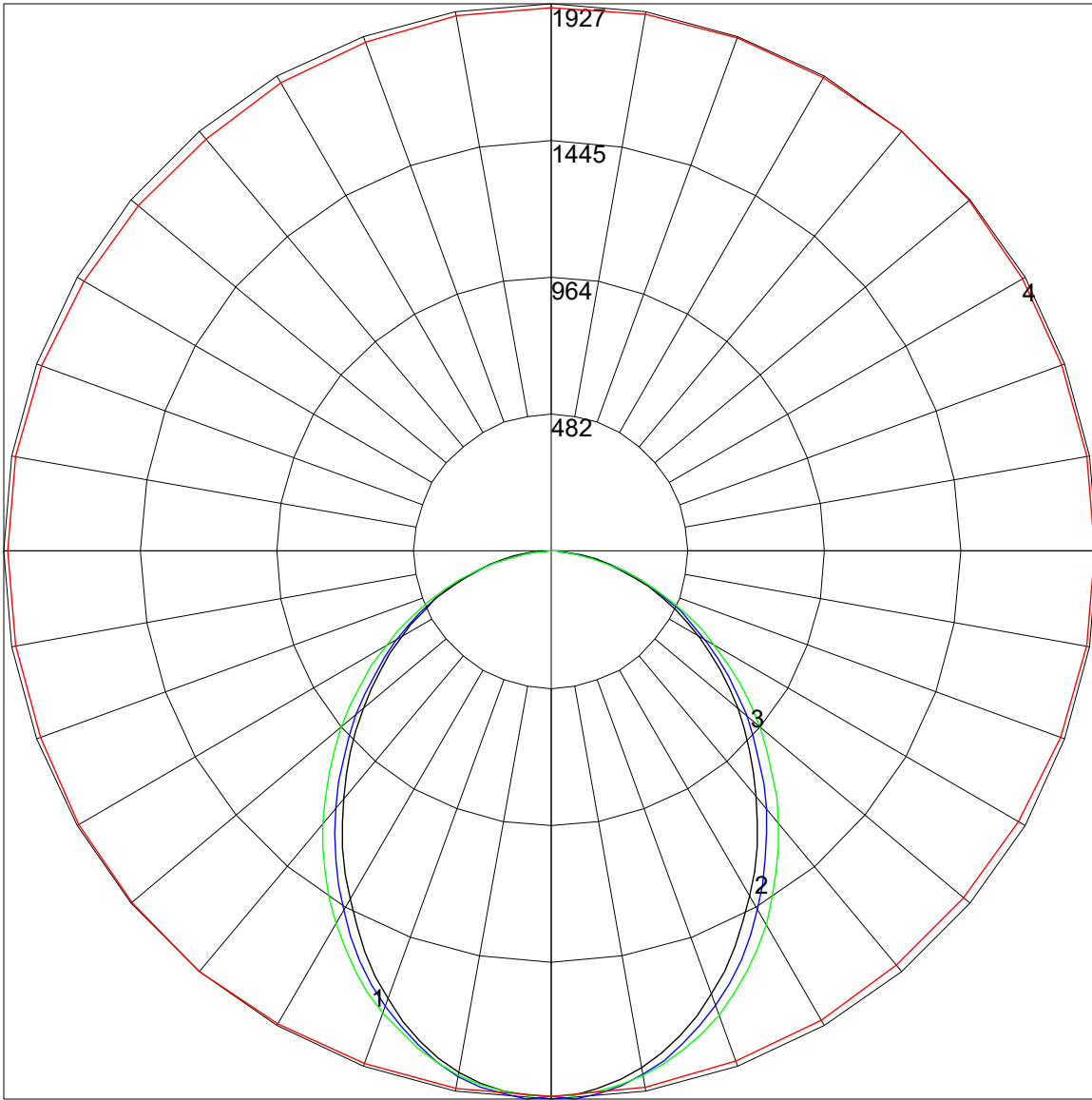
IES INDOOR REPORT
PHOTOMETRIC FILENAME : NLS48HB40.IES

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	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	60
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	59	54	52
5	77	65	56	49	75	63	55	49	61	54	49	59	53	48	58	52	48	45
6	71	58	50	43	70	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

POLAR GRAPH



Maximum Candela = 1927.1 Located At Horizontal Angle = 230, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (230 - 50) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (90 - 270)
3 - Vertical Plane Through Horizontal Angles (0 - 180)
4 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)