

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZL-4-L310-840-HIAFR-ND-XXXX-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 14469285.03
[TESTLAB] UL Solutions
[ISSUE DATE] 11/19/2025
[TEST DATE] 11/2/2022
[MANUFAC] H E Williams Inc
[LUMCAT] HZL-4-L310-840-HIAFR-ND-DIM-UNV
[LUMINAIRE] 4-foot enclosed and gasketed industrial luminaire with nar
[MORE] row distribution
[LAMP] 224 White LEDs
[OTHER] This test was performed using the calibrated photodetector met
[MORE] hod of absolute photometry.

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	29328
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	206
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.13 ft
Luminous Width (90-270)	1.04 ft
Luminous Height	0.19 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	29402	19925	12072
55	25112	12220	6318
65	20093	7394	3837
75	14860	4522	2572
85	8504	2323	1711

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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>
0.0	13851.043	13851.043	13851.043	13851.043	13851.043
0.5	13885.049	13910.553	13823.413	13819.162	13823.413
1.0	13887.174	13910.553	13825.538	13825.538	13829.789
1.5	13885.049	13910.553	13831.914	13836.165	13842.541
2.0	13878.672	13910.553	13838.290	13848.917	13859.544
2.5	13874.422	13908.428	13844.667	13865.920	13880.798
3.0	13870.171	13908.428	13853.168	13885.049	13899.926
3.5	13863.795	13906.302	13865.920	13908.428	13927.556
4.0	13853.168	13904.177	13876.547	13931.807	13957.311
4.5	13846.792	13902.052	13889.299	13959.437	13989.192
5.0	13836.165	13897.801	13899.926	13984.941	14021.072
5.5	13821.287	13895.675	13914.804	14012.571	14052.953
6.0	13810.661	13889.299	13927.556	14042.326	14089.084
6.5	13797.908	13887.174	13940.308	14067.831	14123.090
7.0	13783.031	13882.923	13953.060	14095.460	14157.096
7.5	13766.028	13874.422	13963.687	14123.090	14186.851
8.0	13751.150	13868.046	13976.440	14148.595	14216.606
8.5	13732.022	13861.670	13987.066	14169.848	14242.111
9.0	13712.894	13851.043	13997.693	14191.102	14263.365
9.5	13691.640	13844.667	14006.195	14208.105	14280.368
10.0	13670.386	13831.914	14012.571	14222.983	14295.245
10.5	13649.132	13821.287	14018.947	14233.609	14305.872
11.0	13625.753	13810.661	14023.198	14242.111	14312.248
11.5	13600.249	13797.908	14027.448	14246.362	14312.248
12.0	13574.744	13783.031	14025.323	14242.111	14305.872
12.5	13547.115	13768.153	14023.198	14237.860	14295.245
13.0	13517.359	13753.276	14021.072	14225.108	14280.368
13.5	13487.604	13734.147	14010.445	14208.105	14259.114
14.0	13455.724	13717.144	13999.819	14186.851	14229.359
14.5	13423.843	13695.891	13984.941	14159.221	14193.227
15.0	13389.837	13674.637	13967.938	14125.216	14150.720
15.5	13353.706	13649.132	13944.559	14086.959	14103.962
16.0	13317.575	13625.753	13921.180	14042.326	14050.828
16.5	13279.318	13600.249	13891.425	13993.443	13993.443
17.0	13238.936	13572.619	13861.670	13938.183	13929.681
17.5	13196.428	13542.864	13823.413	13876.547	13857.419
18.0	13153.921	13510.983	13785.156	13810.661	13778.780
18.5	13111.414	13476.977	13740.523	13740.523	13695.891
19.0	13066.781	13442.971	13693.765	13664.010	13606.625
19.5	13020.023	13404.715	13640.631	13581.121	13508.858
20.0	12973.264	13366.458	13583.246	13493.980	13408.966
20.5	12922.256	13323.951	13523.736	13402.589	13296.321
21.0	12873.372	13281.443	13457.849	13304.822	13181.551
21.5	12820.238	13236.810	13387.712	13200.679	13060.405
22.0	12769.229	13187.927	13315.449	13094.411	12937.133
22.5	12713.969	13139.043	13241.061	12979.641	12809.611
23.0	12658.710	13088.034	13158.172	12860.620	12677.838
23.5	12601.325	13032.775	13073.157	12737.348	12541.814
24.0	12543.940	12975.390	12986.017	12609.826	12401.540
24.5	12486.555	12918.005	12892.500	12473.802	12252.764
25.0	12422.793	12858.494	12796.859	12337.779	12097.612
25.5	12361.158	12792.608	12694.841	12193.253	11938.209
26.0	12297.396	12728.847	12582.196	12044.477	11770.304
26.5	12231.510	12662.960	12471.677	11891.451	11598.149

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CANDELA TABULATION - (Cont.)

27.0	12163.49812592.82312365.40811729.92211432.370
27.5	12095.48612520.56012250.63811568.39411277.218
28.0	12025.34912444.04712131.61811398.36511062.556
28.5	11953.08612369.65912008.34611228.33510847.893
29.0	11872.32212288.89511885.07511049.80410656.610
29.5	11795.80912206.00611755.42710871.27310461.076
30.0	11719.29612123.11611625.77910690.61610261.291
30.5	11640.65712035.97611487.63010503.58310059.381
31.0	11559.89311946.71011349.48110316.5519848.969
31.5	11477.00311857.44511207.08110121.0179638.557
32.0	11394.11411759.67811060.4319927.608 9421.770
32.5	11311.22411661.91110911.6559729.948 9200.731
33.0	11224.08411564.14310756.5039528.038 8977.567
33.5	11139.06911460.00010599.2259324.002 8748.027
34.0	11047.67811355.85710441.9489115.716 8520.612
34.5	10958.41311249.58910280.4198905.304 8293.198
35.0	10867.02211139.06910118.8918692.767 8063.657
35.5	10777.75611028.5509953.112 8480.230 7840.494
36.0	10682.11510913.7809787.333 8242.189 7617.330
36.5	10586.47310796.8859619.429 8036.028 7396.291
37.0	10488.70610677.8649445.149 7834.117 7173.127
37.5	10386.68810556.7189272.994 7634.333 6952.088
38.0	10284.67010433.4469094.462 7417.545 6737.426
38.5	10180.52710310.1758915.931 7185.879 6514.262
39.0	10074.25810182.6528733.149 6971.217 6299.600
39.5	9967.990 10055.1308550.367 6760.805 6082.812
40.0	9857.471 9923.357 8365.460 6552.519 5866.024
40.5	9744.826 9791.584 8182.678 6344.232 5657.738
41.0	9630.056 9655.560 7997.771 6140.197 5451.577
41.5	9515.286 9519.537 7814.989 5938.287 5251.792
42.0	9400.516 9381.388 7630.082 5738.502 5060.508
42.5	9283.620 9241.113 7447.300 5545.093 4873.476
43.0	9166.725 9098.713 7262.393 5351.684 4692.819
43.5	9045.579 8958.439 7081.736 5166.777 4522.789
44.0	8926.558 8811.788 6896.829 4983.995 4352.760
44.5	8807.537 8667.263 6714.047 4807.589 4189.106
45.0	8688.517 8520.612 6531.265 4635.434 4027.578
45.5	8567.370 8373.962 6348.483 4467.530 3872.426
46.0	8446.224 8225.186 6167.827 4303.876 3713.023
46.5	8325.078 8076.410 5991.421 4144.473 3534.492
47.0	8201.807 7927.634 5817.140 3989.321 3419.722
47.5	8078.535 7776.732 5655.612 3840.545 3298.576
48.0	7955.264 7625.831 5489.833 3696.020 3164.677
48.5	7829.867 7474.930 5309.177 3555.746 3041.406
49.0	7704.470 7324.028 5145.523 3421.847 2920.260
49.5	7574.822 7173.127 4986.120 3292.200 2807.615
50.0	7447.300 7024.351 4830.968 3166.803 2699.221
50.5	7317.652 6875.575 4675.816 3045.657 2595.078
51.0	7185.879 6724.674 4524.915 2930.887 2495.186
51.5	7054.106 6578.023 4374.013 2820.367 2397.418
52.0	6922.333 6429.247 4229.488 2711.973 2303.902
52.5	6790.560 6282.597 4087.088 2609.956 2214.637
53.0	6658.787 6135.946 3951.065 2512.188 2127.496
53.5	6524.889 5989.295 3815.041 2416.547 2045.457
54.0	6393.116 5844.770 3685.393 2327.281 1966.606
54.5	6263.468 5700.245 3559.996 2240.141 1891.793

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55.0	6131.695	5557.845	3440.976	2157.252	1821.655
55.5	6002.048	5417.571	3324.080	2077.125	1754.494
56.0	5876.651	5277.296	3209.310	2000.187	1691.158
56.5	5749.128	5137.022	3098.791	1919.635	1630.372
57.0	5623.732	5000.998	2992.522	1852.898	1571.712
57.5	5498.335	4867.100	2886.254	1787.862	1516.027
58.0	5375.063	4743.828	2786.361	1724.101	1462.043
58.5	5253.917	4609.930	2688.594	1662.890	1410.396
59.0	5132.771	4469.655	2592.953	1603.805	1360.237
59.5	5011.625	4340.008	2501.562	1546.632	1311.566
60.0	4892.604	4216.736	2412.296	1492.223	1265.233
60.5	4773.583	4104.091	2327.281	1439.514	1220.601
61.0	4654.562	3968.068	2244.392	1389.142	1178.306
61.5	4535.542	3846.921	2165.753	1340.471	1137.711
62.0	4418.646	3727.901	2089.877	1293.926	1099.029
62.5	4299.625	3613.131	2015.489	1249.293	1063.536
63.0	4182.730	3498.361	1942.802	1206.573	1028.042
63.5	4067.960	3385.716	1874.577	1165.128	994.036
64.0	3951.065	3277.322	1806.353	1125.596	960.880
64.5	3838.420	3168.928	1740.679	1087.552	929.637
65.0	3725.775	3064.785	1676.918	1050.358	899.032
65.5	3613.131	2960.642	1615.920	1014.865	869.064
66.0	3502.611	2858.624	1557.259	980.859	840.159
66.5	3394.217	2760.857	1500.299	947.490	812.529
67.0	3287.949	2663.090	1445.040	915.397	786.175
67.5	3183.806	2567.448	1391.693	884.154	760.458
68.0	3090.289	2473.932	1339.621	853.762	734.953
68.5	3005.275	2380.415	1289.250	824.219	710.512
69.0	2869.251	2291.150	1241.217	795.951	686.707
69.5	2767.233	2201.884	1194.246	767.684	664.816
70.0	2684.344	2116.869	1148.763	740.692	642.287
70.5	2592.953	2033.342	1106.893	714.337	620.608
71.0	2499.436	1951.728	1060.348	688.195	599.567
71.5	2408.045	1871.177	1015.715	663.328	578.313
72.0	2318.780	1792.538	974.270	639.099	557.697
72.5	2229.514	1715.599	933.463	615.295	538.144
73.0	2140.249	1640.999	893.931	592.128	517.953
73.5	2053.746	1567.674	855.249	569.599	499.462
74.0	1967.668	1496.261	818.055	547.283	480.121
74.5	1882.654	1425.699	781.711	525.817	462.056
75.0	1798.701	1357.474	746.855	504.988	445.265
75.5	1715.599	1290.950	712.212	484.160	428.050
76.0	1633.348	1225.701	678.843	463.968	411.684
76.5	1552.158	1161.728	646.113	444.628	395.957
77.0	1473.732	1099.667	612.107	425.712	380.016
77.5	1394.668	1038.669	581.289	406.796	364.076
78.0	1318.580	979.371	551.959	388.943	348.561
78.5	1243.980	922.198	523.054	371.302	333.683
79.0	1171.292	865.239	494.149	354.087	319.443
79.5	1100.305	810.616	464.394	337.509	305.416
80.0	1031.655	757.482	437.826	321.569	291.813
80.5	963.431	705.411	412.109	306.904	279.061
81.0	898.607	655.677	387.243	292.239	265.671
81.5	835.271	607.644	363.864	277.148	253.557
82.0	772.997	561.523	340.910	262.908	241.655
82.5	713.700	516.890	319.231	249.731	230.603

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83.0	656.315	475.020	299.252	237.191	219.976
83.5	601.480	435.489	279.486	224.652	209.774
84.0	548.771	397.657	261.421	213.812	200.635
84.5	498.187	362.163	244.418	203.185	191.071
85.0	450.579	329.433	228.690	193.409	182.569
85.5	406.583	299.040	214.025	183.845	174.493
86.0	364.926	271.197	200.422	175.131	166.629
86.5	326.457	246.118	187.883	166.842	159.403
87.0	292.664	221.251	176.193	159.190	152.389
87.5	262.908	202.760	165.779	151.751	146.226
88.0	237.829	185.757	156.427	144.950	140.062
88.5	216.575	170.667	147.288	138.999	134.536
89.0	201.273	157.277	139.424	132.836	129.435
89.5	190.221	145.800	131.986	127.097	124.334
90.0	182.569	135.386	124.972	122.421	120.083
90.5	176.618	128.160	119.233	117.746	115.620
91.0	174.068	122.209	113.495	112.857	111.795
91.5	171.517	116.683	108.606	109.457	108.394
92.0	169.605	112.645	104.356	105.843	104.568
92.5	167.904	109.457	100.318	102.443	100.955
93.0	166.204	106.906	97.129	99.467	98.405
93.5	165.354	105.843	94.792	96.492	95.854
94.0	164.716	104.993	92.454	94.366	93.304
94.5	163.866	104.143	90.753	92.029	91.391
95.0	163.016	103.718	89.266	89.903	89.478
95.5	162.591	103.506	88.203	88.628	88.203
96.0	162.166	103.293	87.565	87.140	86.290
96.5	162.166	103.080	86.503	86.290	85.015
97.0	161.316	102.868	86.503	85.015	83.740
97.5	160.891	102.868	86.503	84.377	83.102
98.0	160.891	102.230	86.290	83.740	82.464
98.5	160.253	101.805	86.290	83.315	82.252
99.0	159.190	102.018	86.503	83.315	81.827
99.5	158.765	101.593	86.928	83.102	81.189
100.0	157.703	101.593	86.928	82.889	81.402
100.5	156.852	101.168	86.928	82.889	81.189
101.0	156.215	100.955	87.565	83.102	81.402
101.5	155.152	100.530	87.140	83.102	81.189
102.0	154.302	100.105	87.353	83.315	81.402
102.5	152.602	99.680	87.353	83.527	81.827
103.0	151.539	99.042	87.565	83.315	82.252
103.5	150.051	98.830	87.353	83.740	81.827
104.0	148.138	97.980	87.565	83.952	82.252
104.5	146.863	97.342	87.353	84.165	82.464
105.0	144.738	96.917	87.565	84.165	82.889
105.5	142.825	95.854	87.353	83.952	82.039
106.0	141.125	95.429	86.928	84.165	82.889
106.5	138.999	94.366	86.928	83.952	82.464
107.0	136.449	93.516	86.503	84.377	82.677
107.5	134.323	92.666	86.503	84.165	83.315
108.0	131.773	91.603	85.865	83.952	82.889
108.5	129.648	90.541	85.440	83.952	82.889
109.0	127.522	89.478	85.440	83.952	82.889
109.5	125.184	88.415	85.015	83.740	83.315
110.0	122.421	87.140	84.377	83.527	82.889
110.5	120.721	85.865	84.165	83.527	82.889

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111.0	118.383	84.590	83.102	83.315	83.102
111.5	115.195	83.315	82.889	83.315	83.102
112.0	112.645	82.039	82.039	83.315	82.677
112.5	110.519	80.339	81.614	82.889	82.889
113.0	108.181	79.064	80.764	82.464	82.464
113.5	105.631	77.576	79.701	81.827	82.677
114.0	103.293	76.088	79.064	81.614	82.252
114.5	101.168	74.813	78.214	81.402	82.039
115.0	98.192	73.325	77.576	80.977	82.039
115.5	95.854	71.625	76.938	80.339	81.827
116.0	93.729	70.350	76.088	79.701	81.402
116.5	90.966	68.437	74.601	79.276	81.402
117.0	88.628	67.162	73.963	79.064	80.764
117.5	86.503	65.461	72.688	78.214	80.977
118.0	84.590	63.761	71.625	77.789	79.914
118.5	82.252	62.486	70.775	77.364	79.489
119.0	79.914	60.573	69.075	76.726	79.064
119.5	77.576	59.298	68.437	75.663	78.639
120.0	75.451	57.598	66.949	75.026	77.789
120.5	73.750	55.897	65.674	73.963	77.364
121.0	71.412	54.622	64.399	73.113	76.938
121.5	69.712	53.347	63.549	72.475	76.301
122.0	67.799	52.072	62.486	71.412	75.663
122.5	66.312	50.796	60.786	70.775	74.601
123.0	64.399	49.096	59.723	69.712	74.388
123.5	62.486	48.033	58.235	69.075	73.113
124.0	60.786	46.758	57.172	67.799	72.688
124.5	59.085	45.270	55.685	66.737	71.838
125.0	57.810	44.208	54.622	65.674	70.987
125.5	55.897	43.145	53.347	64.824	70.350
126.0	54.835	41.870	52.072	63.549	68.862
126.5	53.347	40.807	50.584	62.698	68.224
127.0	52.072	40.170	49.521	61.636	67.374
127.5	50.371	38.894	48.458	60.786	66.312
128.0	49.096	38.044	47.183	59.935	65.461
128.5	48.033	37.194	45.908	58.660	64.399
129.0	46.971	36.344	44.420	57.598	63.974
129.5	45.908	35.281	43.145	56.747	61.848
130.0	44.845	34.644	42.082	55.472	60.998
130.5	43.570	33.581	40.807	54.197	60.148
131.0	42.082	32.731	39.532	52.922	59.298
131.5	41.445	32.306	38.257	51.859	58.235
132.0	40.170	31.455	37.194	51.009	57.172
132.5	39.319	30.605	35.919	49.946	56.322
133.0	38.257	30.393	34.856	48.671	54.835
133.5	37.407	29.543	33.368	47.608	53.559
134.0	36.131	28.693	32.943	46.333	52.709
134.5	35.494	28.267	31.243	45.270	51.221
135.0	34.431	27.842	30.180	44.208	50.371
135.5	34.006	26.992	29.543	42.720	49.096
136.0	32.943	26.780	28.480	42.082	48.246
136.5	32.093	26.142	26.992	41.020	46.546
137.0	31.668	25.717	26.142	39.957	45.695
137.5	31.030	24.867	25.079	38.682	44.420
138.0	29.755	24.654	24.017	37.832	43.570
138.5	29.968	24.229	23.379	36.556	42.720

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HZL-4-L310-840-HIAFR-ND-XXXX-DIM-UNV_.IES****CANDELA TABULATION - (Cont.)**

139.0	28.693	23.592	22.529	35.706	41.232
139.5	28.693	23.167	21.891	34.644	39.957
140.0	27.842	22.741	21.254	34.006	39.107
140.5	26.992	22.316	20.404	32.518	38.044
141.0	26.567	21.891	19.766	31.881	36.769
141.5	25.930	21.679	19.553	30.818	35.919
142.0	25.717	21.679	18.916	30.393	35.281
142.5	25.292	20.829	18.703	29.330	34.644
143.0	24.654	20.616	18.491	28.480	33.156
143.5	24.017	20.404	17.641	28.055	32.731
144.0	23.804	19.978	17.853	27.630	31.668
144.5	23.167	19.553	17.853	26.567	31.030
145.0	22.741	19.553	17.641	25.930	29.755
145.5	22.529	19.341	17.853	25.079	29.330
146.0	21.891	19.128	17.428	24.654	28.267
146.5	21.466	18.703	17.641	23.592	27.417
147.0	21.041	18.491	17.216	22.954	26.780
147.5	20.404	18.278	17.003	22.104	26.142
148.0	20.404	18.278	17.003	21.891	25.292
148.5	20.191	18.278	17.003	21.254	25.079
149.0	19.978	18.066	17.428	21.041	24.017
149.5	19.978	18.278	17.003	20.829	23.379
150.0	19.766	18.278	17.216	20.404	22.954
150.5	19.766	18.703	17.641	20.191	22.316
151.0	19.978	18.278	17.853	19.978	21.891
151.5	19.553	18.491	17.853	19.766	21.679
152.0	19.766	18.703	18.066	19.766	21.041
152.5	19.553	18.916	18.066	19.341	21.041
153.0	19.978	18.916	18.278	19.128	20.404
153.5	19.766	19.128	18.278	19.128	20.404
154.0	19.766	19.128	18.703	19.128	20.191
154.5	19.766	19.128	18.491	18.703	19.553
155.0	19.553	19.341	18.491	18.703	19.766
155.5	19.553	19.553	18.703	18.703	19.341
156.0	19.766	19.553	18.703	18.703	18.916
156.5	19.766	19.341	18.916	18.703	18.703
157.0	19.766	19.553	18.916	18.491	18.278
157.5	19.978	19.766	19.128	18.703	18.916
158.0	20.191	19.766	19.553	18.916	18.916
158.5	20.191	19.978	19.553	18.703	19.341
159.0	20.404	19.978	19.341	19.341	19.128
159.5	20.616	19.978	19.553	19.341	19.341
160.0	20.616	20.191	19.978	19.553	19.978
160.5	20.191	20.404	19.978	19.553	19.341
161.0	21.041	20.404	19.978	19.766	19.978
161.5	20.829	20.616	20.191	20.191	19.978
162.0	20.829	20.616	20.191	20.404	20.404
162.5	21.254	20.404	20.616	20.404	20.191
163.0	20.829	20.829	20.404	20.404	20.191
163.5	21.041	20.616	19.978	20.404	20.191
164.0	20.404	20.191	19.978	20.191	20.191
164.5	20.191	19.978	19.978	19.978	19.766
165.0	20.191	19.978	19.978	19.766	19.766
165.5	20.191	20.191	19.766	19.766	19.978
166.0	19.766	19.766	19.978	19.553	19.766
166.5	20.191	19.978	19.766	19.766	19.766

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HZL-4-L310-840-HIAFR-ND-XXXX-DIM-UNV_.IES****CANDELA TABULATION - (Cont.)**

167.0	19.766	19.978	19.766	20.191	20.616
167.5	20.404	19.978	20.191	20.191	20.829
168.0	20.404	20.404	20.616	20.404	21.041
168.5	21.041	20.616	20.829	20.829	21.254
169.0	20.829	21.041	21.254	21.466	22.104
169.5	22.104	21.466	21.679	22.104	22.104
170.0	21.679	21.891	21.679	22.104	22.741
170.5	21.891	21.891	21.891	22.529	23.167
171.0	22.104	21.679	21.891	22.741	23.379
171.5	22.529	22.104	22.529	22.316	23.592
172.0	22.529	22.529	22.529	22.741	23.592
172.5	22.104	22.104	22.104	22.954	23.804
173.0	22.529	22.316	22.741	22.529	23.592
173.5	22.529	22.529	22.316	22.954	23.592
174.0	22.529	22.316	22.529	23.167	23.592
174.5	22.954	22.529	22.741	22.954	24.017
175.0	22.741	22.954	22.741	23.167	23.804
175.5	22.741	22.529	22.741	23.379	23.804
176.0	22.741	22.741	22.954	23.379	24.229
176.5	22.529	23.167	22.954	23.379	24.229
177.0	22.954	22.741	22.741	23.379	24.229
177.5	23.167	23.379	22.954	23.592	24.442
178.0	23.167	23.167	23.167	23.804	24.229
178.5	23.167	23.167	23.379	23.592	24.654
179.0	23.167	23.167	23.379	23.804	24.442
179.5	23.592	23.379	23.592	23.804	24.867
180.0	23.592	23.592	23.592	23.592	23.592

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L310-840-HIAFR-ND-XXXX-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	5242.74	N.A.	17.90
0-30	10999.48	N.A.	37.50
0-40	17130.5	N.A.	58.40
0-60	25573.27	N.A.	87.20
0-80	28602.75	N.A.	97.50
0-90	28920.22	N.A.	98.60
10-90	27587.48	N.A.	94.10
20-40	11887.77	N.A.	40.50
20-50	16917.3	N.A.	57.70
40-70	10472.17	N.A.	35.70
60-80	3029.48	N.A.	10.30
70-80	1000.08	N.A.	3.40
80-90	317.46	N.A.	1.10
90-110	216.63	N.A.	0.70
90-120	296.27	N.A.	1.00
90-130	347.97	N.A.	1.20
90-150	390.74	N.A.	1.30
90-180	407.58	N.A.	1.40
110-180	190.95	N.A.	0.70
0-180	29327.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1332.74
10-20	3910.00
20-30	5756.75
30-40	6131.02
40-50	5029.53
50-60	3413.24
60-70	2029.4
70-80	1000.08
80-90	317.46
90-100	116.31
100-110	100.33
110-120	79.63
120-130	51.71
130-140	28.42
140-150	14.35
150-160	8.91
160-170	5.76
170-180	2.17

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L310-840-HIAFR-ND-XXXX-DIM-UNV_.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	110	110	110	105	105	105	101	101	101	99
1	110	106	103	99	107	104	100	98	99	97	94	95	93	91	92	90	88	86
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	77	73	69	75	71	67	65
4	87	76	69	63	85	75	68	62	72	66	61	70	65	60	68	63	59	57
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	52	47	45
7	70	58	50	44	68	57	49	44	55	48	44	54	48	43	52	47	43	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZL-4-L310-840-HIAFR-ND-XXXX-DIM-UNV_.IES

UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

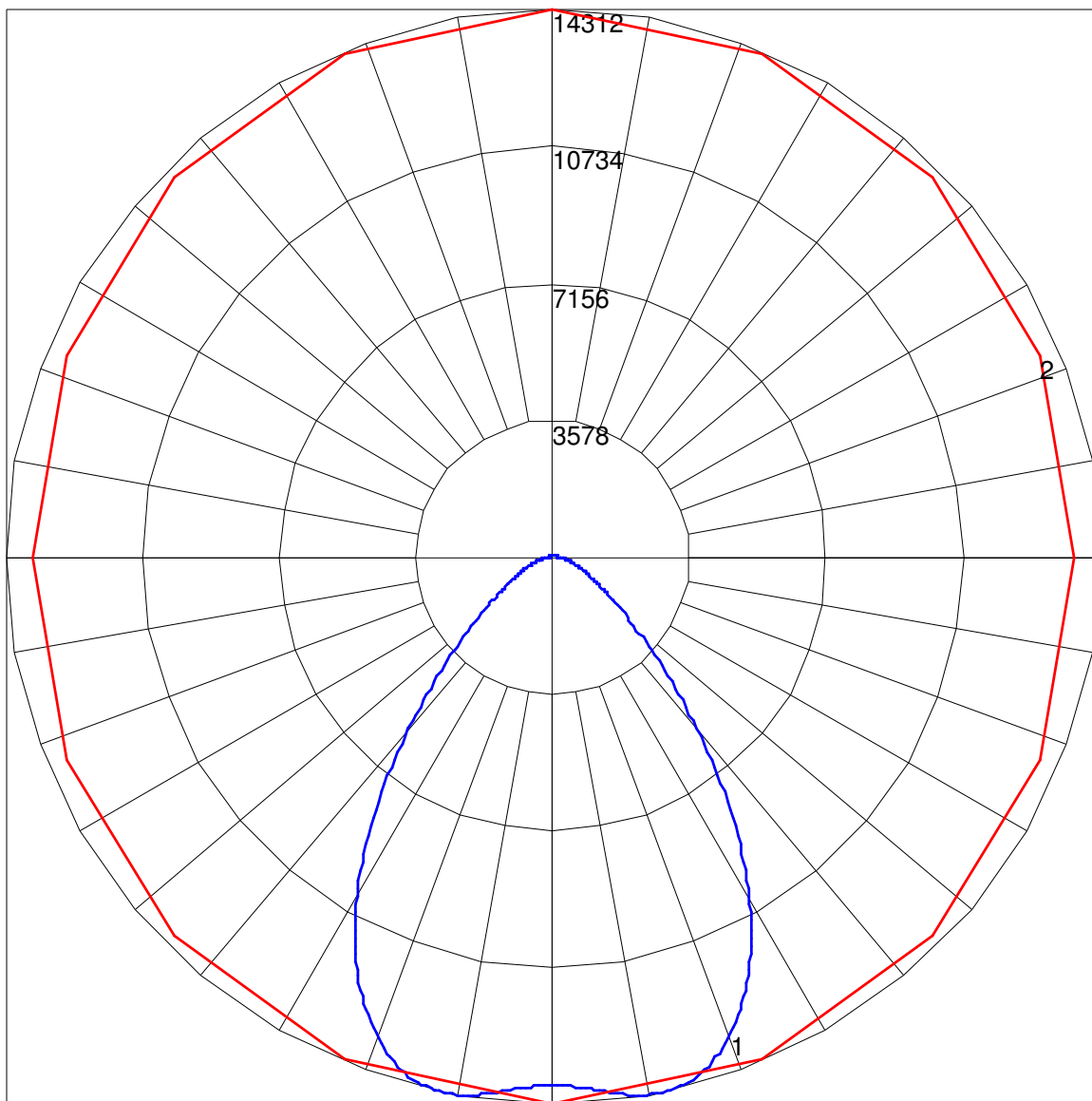
X=2H	Y=2H	22.4	23.8	22.8	24.2	24.5	15.4	16.8	15.8	17.2	17.6
	3H	23.7	24.9	24.1	25.3	25.7	16.4	17.6	16.8	18.0	18.4
	4H	24.1	25.3	24.5	25.6	26.1	16.7	17.9	17.2	18.3	18.7
	6H	24.3	25.4	24.8	25.8	26.3	17.0	18.1	17.5	18.5	18.9
	8H	24.4	25.4	24.8	25.8	26.3	17.1	18.1	17.6	18.6	19.0
	12H	24.4	25.4	24.9	25.8	26.3	17.2	18.2	17.7	18.6	19.1

UGR Viewed Endwise

4H	2H	22.4	23.5	22.8	23.9	24.4	16.4	17.6	16.9	18.0	18.4
	3H	23.8	24.8	24.3	25.2	25.7	17.5	18.5	17.9	18.9	19.4
	4H	24.3	25.2	24.8	25.7	26.1	17.9	18.8	18.4	19.2	19.7
	6H	24.7	25.4	25.2	25.9	26.4	18.2	19.0	18.7	19.4	20.0
	8H	24.8	25.5	25.3	26.0	26.5	18.3	19.0	18.8	19.5	20.0
	12H	24.8	25.5	25.3	26.0	26.5	18.4	19.1	19.0	19.6	20.1
8H	4H	24.3	25.0	24.8	25.5	26.0	18.4	19.1	18.9	19.5	20.1
	6H	24.7	25.3	25.2	25.8	26.3	18.7	19.3	19.3	19.9	20.4
	8H	24.8	25.3	25.4	25.9	26.4	18.9	19.4	19.5	20.0	20.5
	12H	24.9	25.4	25.4	25.9	26.5	19.1	19.5	19.6	20.1	20.7
12H	4H	24.2	24.9	24.8	25.4	25.9	18.4	19.1	18.9	19.6	20.1
	6H	24.7	25.2	25.2	25.7	26.3	18.8	19.4	19.4	19.9	20.5
	8H	24.8	25.3	25.3	25.8	26.4	19.0	19.5	19.6	20.0	20.6

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 14312.248 Located At Horizontal Angle = 90, Vertical Angle = 11
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (11) (Through Max. Cd.)