

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZL-4-L310-840-HIA-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-HIA-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	29914
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
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	29990	20324	12314
55	25614	12465	6444
65	20495	7541	3914
75	15157	4613	2624
85	8674	2369	1746

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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	14128.068	14128.068	14128.068	14128.068	14128.068
0.5	14162.754	14188.769	14099.886	14095.550	14099.886
1.0	14164.922	14188.769	14102.054	14102.054	14106.389
1.5	14162.754	14188.769	14108.557	14112.893	14119.397
2.0	14156.251	14188.769	14115.061	14125.900	14136.740
2.5	14151.915	14186.601	14121.564	14143.243	14158.418
3.0	14147.579	14186.601	14130.236	14162.754	14177.929
3.5	14141.075	14184.433	14143.243	14186.601	14206.112
4.0	14130.236	14182.265	14154.083	14210.448	14236.462
4.5	14123.732	14180.097	14167.090	14238.630	14268.980
5.0	14112.893	14175.761	14177.929	14264.645	14301.498
5.5	14097.718	14173.594	14193.104	14292.827	14334.017
6.0	14086.878	14167.090	14206.112	14323.177	14370.871
6.5	14073.871	14164.922	14219.119	14349.192	14405.557
7.0	14058.696	14160.586	14232.126	14377.374	14440.243
7.5	14041.353	14151.915	14242.966	14405.557	14470.593
8.0	14026.178	14145.411	14255.973	14431.571	14500.943
8.5	14006.667	14138.908	14266.812	14453.250	14526.958
9.0	13987.156	14128.068	14277.652	14474.929	14548.637
9.5	13965.477	14121.564	14286.323	14492.272	14565.980
10.0	13943.798	14108.557	14292.827	14507.447	14581.155
10.5	13922.120	14097.718	14299.331	14518.286	14591.994
11.0	13898.273	14086.878	14303.666	14526.958	14598.498
11.5	13872.258	14073.871	14308.002	14531.294	14598.498
12.0	13846.244	14058.696	14305.834	14526.958	14591.994
12.5	13818.061	14043.521	14303.666	14522.622	14581.155
13.0	13787.711	14028.346	14301.498	14509.615	14565.980
13.5	13757.361	14008.835	14290.659	14492.272	14544.301
14.0	13724.843	13991.492	14279.820	14470.593	14513.951
14.5	13692.324	13969.813	14264.645	14442.411	14477.097
15.0	13657.638	13948.134	14247.301	14407.725	14433.739
15.5	13620.784	13922.120	14223.455	14368.703	14386.046
16.0	13583.930	13898.273	14199.608	14323.177	14331.849
16.5	13544.909	13872.258	14169.258	14273.316	14273.316
17.0	13503.719	13844.076	14138.908	14216.951	14208.280
17.5	13460.361	13813.726	14099.886	14154.083	14134.572
18.0	13417.004	13781.207	14060.864	14086.878	14054.360
18.5	13373.646	13746.521	14015.338	14015.338	13969.813
19.0	13328.121	13711.835	13967.645	13937.295	13878.762
19.5	13280.427	13672.814	13913.448	13852.747	13779.040
20.0	13232.734	13633.792	13854.915	13763.864	13677.149
20.5	13180.705	13590.434	13794.215	13670.646	13562.252
21.0	13130.844	13547.077	13727.010	13570.923	13445.186
21.5	13076.647	13501.551	13655.470	13464.697	13321.617
22.0	13024.618	13451.690	13581.763	13356.303	13195.880
22.5	12968.253	13401.829	13505.887	13239.238	13065.807
23.0	12911.888	13349.800	13421.340	13117.836	12931.399
23.5	12853.355	13293.435	13334.624	12992.099	12792.655
24.0	12794.822	13234.902	13245.741	12862.027	12649.575
24.5	12736.290	13176.369	13150.355	12723.282	12497.823
25.0	12671.253	13115.669	13052.800	12584.538	12339.568
25.5	12608.385	13048.464	12948.742	12437.122	12176.977
26.0	12543.348	12983.428	12833.844	12285.371	12005.714
26.5	12476.144	12916.224	12721.115	12129.284	11830.116

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CANDELA TABULATION - (Cont.)

27.0	12406.77212844.68412612.72111964.52511661.022
27.5	12337.40012770.97612495.65511799.76611502.767
28.0	12265.86012692.93212374.25411626.33611283.811
28.5	12192.15212617.05612248.51711452.90511064.855
29.0	12109.77312534.67712122.78011270.80310869.746
29.5	12031.72912450.13011990.53911088.70210670.301
30.0	11953.68512365.58211858.29910904.43210466.520
30.5	11873.47412276.69911717.38710713.65910260.572
31.0	11791.09412185.64811576.47410522.88510045.952
31.5	11706.54712094.59811431.22710323.4409831.332
32.0	11622.00011994.87511281.64310126.1639610.208
32.5	11537.45311895.15311129.8919924.551 9384.749
33.0	11448.57011795.43010971.6369718.602 9157.121
33.5	11361.85411689.20410811.2139510.486 8922.990
34.0	11268.63611582.97810650.7909298.033 8691.027
34.5	11177.58511474.58410486.0319083.413 8459.064
35.0	11084.36611361.85410321.2728866.626 8224.933
35.5	10993.31511249.12510152.1788649.838 7997.306
36.0	10895.76011132.0599983.083 8407.035 7769.679
36.5	10798.20611012.8269811.821 8196.751 7544.219
37.0	10698.48310891.4259634.055 7990.802 7316.592
37.5	10594.42510767.8569458.457 7787.022 7091.133
38.0	10490.36710642.1199276.355 7565.898 6872.177
38.5	10384.14110516.3829094.253 7329.599 6644.549
39.0	10275.74710386.3098907.815 7110.643 6425.594
39.5	10167.35310256.2368721.378 6896.023 6204.470
40.0	10054.62310121.8288532.772 6683.571 5983.346
40.5	9939.726 9987.419 8346.335 6471.119 5770.894
41.0	9822.660 9848.675 8157.729 6263.003 5560.610
41.5	9705.595 9709.931 7971.291 6057.054 5356.829
42.0	9588.529 9569.018 7782.686 5853.274 5161.720
42.5	9469.296 9425.938 7596.248 5655.997 4970.947
43.0	9350.063 9280.690 7407.643 5458.720 4786.677
43.5	9226.493 9137.610 7223.373 5270.114 4613.247
44.0	9105.092 8988.027 7034.768 5083.677 4439.816
44.5	8983.691 8840.611 6848.330 4903.743 4272.890
45.0	8862.290 8691.027 6661.892 4728.144 4108.131
45.5	8738.721 8541.444 6475.455 4556.882 3949.876
46.0	8615.152 8389.692 6291.185 4389.955 3787.285
46.5	8491.582 8237.941 6111.251 4227.364 3605.183
47.0	8365.845 8086.189 5933.485 4069.109 3488.117
47.5	8240.108 7932.270 5768.726 3917.358 3364.548
48.0	8114.371 7778.350 5599.632 3769.942 3227.972
48.5	7986.467 7624.431 5415.362 3626.862 3102.235
49.0	7858.562 7470.511 5248.435 3490.285 2978.666
49.5	7726.321 7316.592 5085.844 3358.045 2863.768
50.0	7596.248 7164.840 4927.589 3230.140 2753.206
50.5	7464.008 7013.089 4769.334 3106.571 2646.980
51.0	7329.599 6859.169 4615.415 2989.505 2545.090
51.5	7195.191 6709.586 4461.495 2876.776 2445.368
52.0	7060.782 6557.834 4314.079 2766.214 2349.981
52.5	6926.374 6408.251 4168.832 2662.156 2258.930
53.0	6791.965 6258.667 4030.087 2562.433 2170.047
53.5	6655.389 6109.083 3891.343 2464.879 2086.367
54.0	6520.980 5961.668 3759.102 2373.828 2005.939
54.5	6388.740 5814.252 3631.198 2284.945 1929.629

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CANDELA TABULATION - (Cont.)

55.0	6254.331	5669.004	3509.796	2200.397	1858.089
55.5	6122.091	5525.924	3390.563	2118.668	1789.584
56.0	5994.186	5382.844	3273.497	2040.191	1724.981
56.5	5864.113	5239.764	3160.768	1958.028	1662.980
57.0	5736.208	5101.020	3052.374	1889.957	1603.147
57.5	5608.303	4964.443	2943.980	1823.620	1546.348
58.0	5482.566	4838.706	2842.090	1758.584	1491.284
58.5	5358.997	4702.130	2742.367	1696.149	1438.605
59.0	5235.428	4559.050	2644.813	1635.882	1387.443
59.5	5111.859	4426.809	2551.594	1577.566	1337.798
60.0	4990.458	4301.072	2460.543	1522.068	1290.538
60.5	4869.056	4186.175	2373.828	1468.305	1245.013
61.0	4747.655	4047.430	2289.280	1416.926	1201.872
61.5	4626.254	3923.861	2209.069	1367.281	1160.466
62.0	4507.021	3802.460	2131.676	1319.805	1121.010
62.5	4385.619	3685.394	2055.800	1274.279	1084.807
63.0	4266.386	3568.329	1981.658	1230.705	1048.603
63.5	4149.321	3453.431	1912.069	1188.431	1013.917
64.0	4030.087	3342.870	1842.480	1148.109	980.098
64.5	3915.190	3232.308	1775.493	1109.304	948.230
65.0	3800.292	3126.082	1710.457	1071.366	917.013
65.5	3685.394	3019.856	1648.238	1035.162	886.446
66.0	3572.665	2915.797	1588.405	1000.476	856.963
66.5	3462.103	2816.075	1530.306	966.441	828.780
67.0	3353.709	2716.353	1473.941	933.706	801.898
67.5	3247.483	2618.798	1419.527	901.838	775.667
68.0	3152.096	2523.411	1366.414	870.837	749.653
68.5	3065.381	2428.025	1315.035	840.704	724.722
69.0	2926.637	2336.974	1266.041	811.871	700.442
69.5	2822.579	2245.923	1218.131	783.038	678.113
70.0	2738.031	2159.208	1171.739	755.506	655.133
70.5	2644.813	2074.010	1129.031	728.624	633.021
71.0	2549.426	1990.763	1081.555	701.959	611.559
71.5	2456.207	1908.601	1036.029	676.595	589.880
72.0	2365.156	1828.389	993.756	651.881	568.851
72.5	2274.105	1749.912	952.133	627.601	548.907
73.0	2183.054	1673.819	911.810	603.971	528.312
73.5	2094.822	1599.028	872.355	580.992	509.452
74.0	2007.022	1526.187	834.417	558.229	489.724
74.5	1920.307	1454.213	797.346	536.333	471.297
75.0	1834.676	1384.624	761.793	515.088	454.171
75.5	1749.912	1316.770	726.456	493.843	436.611
76.0	1666.015	1250.216	692.421	473.248	419.918
76.5	1583.202	1184.963	659.035	453.520	403.876
77.0	1503.207	1121.661	624.349	434.226	387.617
77.5	1422.562	1059.443	592.915	414.932	371.358
78.0	1344.952	998.959	562.998	396.722	355.532
78.5	1268.860	940.643	533.515	378.728	340.357
79.0	1194.718	882.544	504.032	361.169	325.832
79.5	1122.311	826.829	473.682	344.259	311.524
80.0	1052.289	772.632	446.583	328.000	297.650
80.5	982.700	719.519	420.352	313.042	284.643
81.0	916.579	668.791	394.988	298.083	270.985
81.5	851.976	619.797	371.141	282.691	258.628
82.0	788.458	572.754	347.728	268.167	246.488
82.5	727.974	527.228	325.615	254.726	235.215

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83.0	669.441	484.521	305.237	241.935	224.375
83.5	613.510	444.198	285.076	229.145	213.970
84.0	559.746	405.610	266.649	218.089	204.648
84.5	508.151	369.407	249.306	207.249	194.892
85.0	459.590	336.021	233.264	197.277	186.221
85.5	414.715	305.021	218.305	187.522	177.983
86.0	372.225	276.621	204.431	178.633	169.962
86.5	332.986	251.040	191.641	170.179	162.591
87.0	298.517	225.676	179.717	162.374	155.437
87.5	268.167	206.816	169.095	154.787	149.150
88.0	242.586	189.473	159.556	147.849	142.863
88.5	220.907	174.081	150.234	141.779	137.227
89.0	205.298	160.423	142.213	135.492	132.024
89.5	194.025	148.717	134.625	129.639	126.821
90.0	186.221	138.094	127.471	124.870	122.485
90.5	180.151	130.723	121.618	120.101	117.933
91.0	177.549	124.653	115.765	115.114	114.030
91.5	174.948	119.017	110.779	111.646	110.562
92.0	172.997	114.898	106.443	107.960	106.660
92.5	171.262	111.646	102.324	104.492	102.974
93.0	169.528	109.044	99.072	101.457	100.373
93.5	168.661	107.960	96.687	98.422	97.771
94.0	168.011	107.093	94.303	96.254	95.170
94.5	167.143	106.226	92.568	93.869	93.219
95.0	166.276	105.793	91.051	91.701	91.268
95.5	165.843	105.576	89.967	90.401	89.967
96.0	165.409	105.359	89.317	88.883	88.016
96.5	165.409	105.142	88.233	88.016	86.715
97.0	164.542	104.925	88.233	86.715	85.414
97.5	164.108	104.925	88.233	86.065	84.764
98.0	164.108	104.275	88.016	85.414	84.114
98.5	163.458	103.841	88.016	84.981	83.897
99.0	162.374	104.058	88.233	84.981	83.463
99.5	161.941	103.625	88.666	84.764	82.813
100.0	160.857	103.625	88.666	84.547	83.030
100.5	159.989	103.191	88.666	84.547	82.813
101.0	159.339	102.974	89.317	84.764	83.030
101.5	158.255	102.541	88.883	84.764	82.813
102.0	157.388	102.107	89.100	84.981	83.030
102.5	155.654	101.674	89.100	85.198	83.463
103.0	154.570	101.023	89.317	84.981	83.897
103.5	153.052	100.806	89.100	85.414	83.463
104.0	151.101	99.939	89.317	85.631	83.897
104.5	149.800	99.289	89.100	85.848	84.114
105.0	147.633	98.855	89.317	85.848	84.547
105.5	145.681	97.771	89.100	85.631	83.680
106.0	143.947	97.338	88.666	85.848	84.547
106.5	141.779	96.254	88.666	85.631	84.114
107.0	139.178	95.387	88.233	86.065	84.330
107.5	137.010	94.520	88.233	85.848	84.981
108.0	134.409	93.436	87.582	85.631	84.547
108.5	132.241	92.352	87.149	85.631	84.547
109.0	130.073	91.268	87.149	85.631	84.547
109.5	127.688	90.184	86.715	85.414	84.981
110.0	124.870	88.883	86.065	85.198	84.547
110.5	123.136	87.582	85.848	85.198	84.547

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111.0	120.751	86.282	84.764	84.981	84.764
111.5	117.499	84.981	84.547	84.981	84.764
112.0	114.898	83.680	83.680	84.981	84.330
112.5	112.730	81.946	83.247	84.547	84.547
113.0	110.345	80.645	82.379	84.114	84.114
113.5	107.744	79.128	81.295	83.463	84.330
114.0	105.359	77.610	80.645	83.247	83.897
114.5	103.191	76.309	79.778	83.030	83.680
115.0	100.156	74.792	79.128	82.596	83.680
115.5	97.771	73.058	78.477	81.946	83.463
116.0	95.603	71.757	77.610	81.295	83.030
116.5	92.785	69.806	76.093	80.862	83.030
117.0	90.401	68.505	75.442	80.645	82.379
117.5	88.233	66.771	74.141	79.778	82.596
118.0	86.282	65.036	73.058	79.344	81.512
118.5	83.897	63.736	72.190	78.911	81.079
119.0	81.512	61.785	70.456	78.260	80.645
119.5	79.128	60.484	69.806	77.176	80.212
120.0	76.960	58.750	68.288	76.526	79.344
120.5	75.225	57.015	66.987	75.442	78.911
121.0	72.841	55.714	65.687	74.575	78.477
121.5	71.106	54.414	64.820	73.925	77.827
122.0	69.155	53.113	63.736	72.841	77.176
122.5	67.638	51.812	62.001	72.190	76.093
123.0	65.687	50.078	60.917	71.106	75.876
123.5	63.736	48.994	59.400	70.456	74.575
124.0	62.001	47.693	58.316	69.155	74.141
124.5	60.267	46.176	56.798	68.071	73.274
125.0	58.966	45.092	55.714	66.987	72.407
125.5	57.015	44.008	54.414	66.120	71.757
126.0	55.931	42.707	53.113	64.820	70.239
126.5	54.414	41.623	51.596	63.952	69.589
127.0	53.113	40.973	50.512	62.868	68.722
127.5	51.379	39.672	49.428	62.001	67.638
128.0	50.078	38.805	48.127	61.134	66.771
128.5	48.994	37.938	46.826	59.833	65.687
129.0	47.910	37.071	45.309	58.750	65.253
129.5	46.826	35.987	44.008	57.882	63.085
130.0	45.742	35.336	42.924	56.582	62.218
130.5	44.442	34.252	41.623	55.281	61.351
131.0	42.924	33.385	40.323	53.980	60.484
131.5	42.274	32.952	39.022	52.896	59.400
132.0	40.973	32.085	37.938	52.029	58.316
132.5	40.106	31.217	36.637	50.945	57.449
133.0	39.022	31.001	35.553	49.644	55.931
133.5	38.155	30.134	34.036	48.560	54.631
134.0	36.854	29.266	33.602	47.260	53.763
134.5	36.204	28.833	31.868	46.176	52.246
135.0	35.120	28.399	30.784	45.092	51.379
135.5	34.686	27.532	30.134	43.574	50.078
136.0	33.602	27.315	29.050	42.924	49.211
136.5	32.735	26.665	27.532	41.840	47.477
137.0	32.301	26.231	26.665	40.756	46.609
137.5	31.651	25.364	25.581	39.455	45.309
138.0	30.350	25.147	24.497	38.588	44.442
138.5	30.567	24.714	23.847	37.288	43.574

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

139.0	29.266	24.063	22.980	36.420	42.057
139.5	29.266	23.630	22.329	35.336	40.756
140.0	28.399	23.196	21.679	34.686	39.889
140.5	27.532	22.763	20.812	33.169	38.805
141.0	27.098	22.329	20.161	32.518	37.504
141.5	26.448	22.112	19.944	31.434	36.637
142.0	26.231	22.112	19.294	31.001	35.987
142.5	25.798	21.245	19.077	29.917	35.336
143.0	25.147	21.028	18.861	29.050	33.819
143.5	24.497	20.812	17.993	28.616	33.385
144.0	24.280	20.378	18.210	28.182	32.301
144.5	23.630	19.944	18.210	27.098	31.651
145.0	23.196	19.944	17.993	26.448	30.350
145.5	22.980	19.728	18.210	25.581	29.917
146.0	22.329	19.511	17.777	25.147	28.833
146.5	21.896	19.077	17.993	24.063	27.966
147.0	21.462	18.861	17.560	23.413	27.315
147.5	20.812	18.644	17.343	22.546	26.665
148.0	20.812	18.644	17.343	22.329	25.798
148.5	20.595	18.644	17.343	21.679	25.581
149.0	20.378	18.427	17.777	21.462	24.497
149.5	20.378	18.644	17.343	21.245	23.847
150.0	20.161	18.644	17.560	20.812	23.413
150.5	20.161	19.077	17.993	20.595	22.763
151.0	20.378	18.644	18.210	20.378	22.329
151.5	19.944	18.861	18.210	20.161	22.112
152.0	20.161	19.077	18.427	20.161	21.462
152.5	19.944	19.294	18.427	19.728	21.462
153.0	20.378	19.294	18.644	19.511	20.812
153.5	20.161	19.511	18.644	19.511	20.812
154.0	20.161	19.511	19.077	19.511	20.595
154.5	20.161	19.511	18.861	19.077	19.944
155.0	19.944	19.728	18.861	19.077	20.161
155.5	19.944	19.944	19.077	19.077	19.728
156.0	20.161	19.944	19.077	19.077	19.294
156.5	20.161	19.728	19.294	19.077	19.077
157.0	20.161	19.944	19.294	18.861	18.644
157.5	20.378	20.161	19.511	19.077	19.294
158.0	20.595	20.161	19.944	19.294	19.294
158.5	20.595	20.378	19.944	19.077	19.728
159.0	20.812	20.378	19.728	19.728	19.511
159.5	21.028	20.378	19.944	19.728	19.728
160.0	21.028	20.595	20.378	19.944	20.378
160.5	20.595	20.812	20.378	19.944	19.728
161.0	21.462	20.812	20.378	20.161	20.378
161.5	21.245	21.028	20.595	20.595	20.378
162.0	21.245	21.028	20.595	20.812	20.812
162.5	21.679	20.812	21.028	20.812	20.595
163.0	21.245	21.245	20.812	20.812	20.595
163.5	21.462	21.028	20.378	20.812	20.595
164.0	20.812	20.595	20.378	20.595	20.595
164.5	20.595	20.378	20.378	20.378	20.161
165.0	20.595	20.378	20.378	20.161	20.161
165.5	20.595	20.595	20.161	20.161	20.378
166.0	20.161	20.161	20.378	19.944	20.161
166.5	20.595	20.378	20.161	20.161	20.161

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

167.0	20.161	20.378	20.161	20.595	21.028
167.5	20.812	20.378	20.595	20.595	21.245
168.0	20.812	20.812	21.028	20.812	21.462
168.5	21.462	21.028	21.245	21.245	21.679
169.0	21.245	21.462	21.679	21.896	22.546
169.5	22.546	21.896	22.112	22.546	22.546
170.0	22.112	22.329	22.112	22.546	23.196
170.5	22.329	22.329	22.329	22.980	23.630
171.0	22.546	22.112	22.329	23.196	23.847
171.5	22.980	22.546	22.980	22.763	24.063
172.0	22.980	22.980	22.980	23.196	24.063
172.5	22.546	22.546	22.546	23.413	24.280
173.0	22.980	22.763	23.196	22.980	24.063
173.5	22.980	22.980	22.763	23.413	24.063
174.0	22.980	22.763	22.980	23.630	24.063
174.5	23.413	22.980	23.196	23.413	24.497
175.0	23.196	23.413	23.196	23.630	24.280
175.5	23.196	22.980	23.196	23.847	24.280
176.0	23.196	23.196	23.413	23.847	24.714
176.5	22.980	23.630	23.413	23.847	24.714
177.0	23.413	23.196	23.196	23.847	24.714
177.5	23.630	23.847	23.413	24.063	24.931
178.0	23.630	23.630	23.630	24.280	24.714
178.5	23.630	23.630	23.847	24.063	25.147
179.0	23.630	23.630	23.847	24.280	24.931
179.5	24.063	23.847	24.063	24.280	25.364
180.0	24.063	24.063	24.063	24.063	24.063

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

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	5347.59	N.A.	17.90
0-30	11219.48	N.A.	37.50
0-40	17473.12	N.A.	58.40
0-60	26084.75	N.A.	87.20
0-80	29174.82	N.A.	97.50
0-90	29498.63	N.A.	98.60
10-90	28139.24	N.A.	94.10
20-40	12125.53	N.A.	40.50
20-50	17255.65	N.A.	57.70
40-70	10681.62	N.A.	35.70
60-80	3090.07	N.A.	10.30
70-80	1020.08	N.A.	3.40
80-90	323.81	N.A.	1.10
90-110	220.97	N.A.	0.70
90-120	302.19	N.A.	1.00
90-130	354.93	N.A.	1.20
90-150	398.56	N.A.	1.30
90-180	415.74	N.A.	1.40
110-180	194.77	N.A.	0.70
0-180	29914.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1359.39
10-20	3988.2
20-30	5871.88
30-40	6253.64
40-50	5130.12
50-60	3481.51
60-70	2069.99
70-80	1020.08
80-90	323.81
90-100	118.63
100-110	102.33
110-120	81.23
120-130	52.74
130-140	28.99
140-150	14.63
150-160	9.09
160-170	5.88
170-180	2.21

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HZL-4-L310-840-HIA-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	46
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-HIA-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

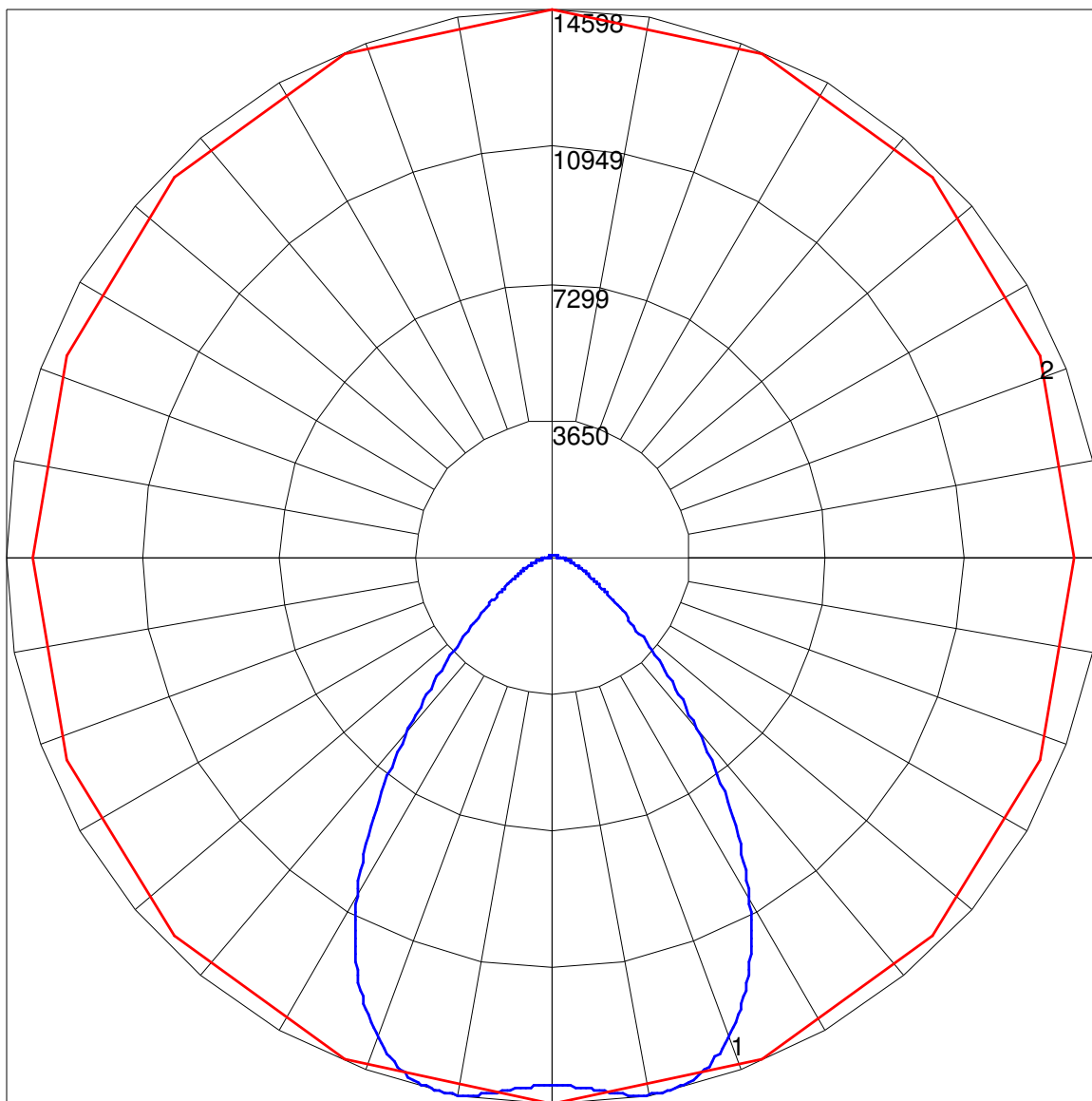
X=2H	Y=2H	22.5	23.9	22.9	24.3	24.6	15.5	16.9	15.9	17.3	17.7
	3H	23.8	25.0	24.2	25.4	25.8	16.5	17.7	16.9	18.1	18.5
	4H	24.2	25.4	24.6	25.7	26.2	16.8	18.0	17.3	18.4	18.8
	6H	24.4	25.5	24.9	25.9	26.4	17.1	18.2	17.6	18.6	19.0
	8H	24.5	25.5	24.9	25.9	26.4	17.2	18.2	17.7	18.7	19.1
	12H	24.5	25.5	25.0	25.9	26.4	17.3	18.3	17.8	18.7	19.2

UGR Viewed Endwise

4H	2H	22.5	23.6	22.9	24.0	24.5	16.5	17.7	17.0	18.1	18.5
	3H	23.9	24.9	24.4	25.3	25.8	17.6	18.6	18.0	19.0	19.5
	4H	24.4	25.3	24.9	25.8	26.2	18.0	18.9	18.5	19.3	19.8
	6H	24.8	25.5	25.3	26.0	26.5	18.3	19.1	18.8	19.5	20.1
	8H	24.9	25.6	25.4	26.1	26.6	18.4	19.1	18.9	19.6	20.1
	12H	24.9	25.6	25.4	26.1	26.6	18.5	19.2	19.1	19.7	20.2
8H	4H	24.4	25.1	24.9	25.6	26.1	18.5	19.2	19.0	19.6	20.2
	6H	24.8	25.4	25.3	25.9	26.4	18.8	19.4	19.4	20.0	20.5
	8H	24.9	25.4	25.5	26.0	26.5	19.0	19.5	19.6	20.1	20.6
	12H	25.0	25.5	25.5	26.0	26.6	19.2	19.6	19.7	20.2	20.8
12H	4H	24.3	25.0	24.9	25.5	26.0	18.5	19.2	19.0	19.7	20.2
	6H	24.8	25.3	25.3	25.8	26.4	18.9	19.5	19.5	20.0	20.6
	8H	24.9	25.4	25.4	25.9	26.5	19.1	19.6	19.7	20.1	20.7

Maximum UGR = 26.6

POLAR GRAPH



Maximum Candela = 14598.498 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.)