

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : P4030-LED4-HO-FWA-D1.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002

[TEST] P3930 or 4030-LED4-HO-FWA -D1

[TESTLAB] Intertek

[ISSUE DATE] October 4, 2016

[MANUFAC] Prudential Ltg

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13903
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	146
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Circular
Luminous Length (0-180)	2.96 ft (Diameter)
Luminous Width (90-270)	2.96 ft (Diameter)
Luminous Height	0.00 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7120	7101	7116
55	6875	6844	6849
65	6493	6451	6473
75	5889	5873	5908
85	4629	4711	4812

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : P4030-LED4-HO-FWA-D1.IES**

**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>	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290
<b>2.5</b>	4815.183	4813.773	4815.695	4815.369	4816.454	4815.369	4815.695	4813.773	4817.493	4813.773
<b>5.0</b>	4799.280	4799.172	4799.451	4798.536	4799.606	4798.536	4799.451	4799.172	4800.505	4799.172
<b>7.5</b>	4773.938	4773.535	4771.349	4769.954	4771.055	4769.954	4771.349	4773.535	4770.001	4773.535
<b>10.0</b>	4732.925	4733.436	4733.405	4734.552	4733.529	4734.552	4733.405	4733.436	4733.731	4733.436
<b>12.5</b>	4683.635	4686.146	4685.092	4682.472	4684.782	4682.472	4685.092	4686.146	4685.046	4686.146
<b>15.0</b>	4624.177	4629.571	4624.983	4625.463	4625.572	4625.463	4624.983	4629.571	4626.440	4629.571
<b>17.5</b>	4552.536	4558.349	4558.829	4554.969	4555.977	4554.969	4558.829	4558.349	4558.612	4558.349
<b>20.0</b>	4475.532	4477.841	4477.407	4477.299	4478.554	4477.299	4477.407	4477.841	4479.112	4477.841
<b>22.5</b>	4387.662	4391.010	4388.499	4387.430	4390.855	4387.430	4388.499	4391.010	4389.863	4391.010
<b>25.0</b>	4285.424	4290.307	4288.633	4287.238	4291.020	4287.238	4288.633	4290.307	4294.461	4290.307
<b>27.5</b>	4180.536	4183.249	4182.706	4180.691	4185.868	4180.691	4182.706	4183.249	4184.442	4183.249
<b>30.0</b>	4058.303	4069.494	4068.982	4064.921	4071.323	4064.921	4068.982	4069.494	4072.997	4069.494
<b>32.5</b>	3931.513	3943.618	3941.046	3941.154	3949.943	3941.154	3941.046	3943.618	3948.733	3943.618
<b>35.0</b>	3800.026	3814.782	3808.862	3811.930	3816.255	3811.930	3808.862	3814.782	3812.178	3814.782
<b>37.5</b>	3673.004	3671.640	3669.501	3668.478	3675.313	3668.478	3669.501	3671.640	3670.493	3671.640
<b>40.0</b>	3534.946	3522.375	3521.894	3521.212	3526.824	3521.212	3521.894	3522.375	3525.924	3522.375
<b>42.5</b>	3381.945	3373.280	3369.173	3369.111	3374.582	3369.111	3369.173	3373.280	3370.831	3373.280
<b>45.0</b>	3217.784	3211.522	3209.492	3208.252	3216.172	3208.252	3209.492	3211.522	3206.718	3211.522
<b>47.5</b>	3043.564	3044.851	3041.844	3042.309	3048.292	3042.309	3041.844	3044.851	3037.690	3044.851
<b>50.0</b>	2872.150	2873.808	2867.608	2868.988	2873.777	2868.988	2867.608	2873.808	2866.415	2873.808
<b>52.5</b>	2700.999	2696.054	2690.397	2690.040	2694.427	2690.040	2690.397	2696.054	2686.568	2696.054
<b>55.0</b>	2520.408	2512.317	2508.985	2507.094	2510.845	2507.094	2508.985	2512.317	2505.218	2512.317
<b>57.5</b>	2328.689	2326.209	2321.931	2322.814	2326.658	2322.814	2321.931	2326.209	2317.622	2326.209
<b>60.0</b>	2134.706	2138.380	2132.924	2133.823	2137.528	2133.823	2132.924	2138.380	2129.607	2138.380
<b>62.5</b>	1943.778	1943.979	1938.321	1943.483	1943.390	1943.483	1938.321	1943.979	1938.461	1943.979
<b>65.0</b>	1753.856	1750.353	1742.464	1748.865	1748.462	1748.865	1742.464	1750.353	1741.146	1750.353
<b>67.5</b>	1557.579	1554.278	1546.915	1549.535	1555.936	1549.535	1546.915	1554.278	1547.241	1554.278
<b>70.0</b>	1355.289	1357.800	1354.839	1353.956	1359.164	1353.956	1354.839	1357.800	1353.088	1357.800
<b>72.5</b>	1161.415	1164.654	1162.019	1164.422	1167.367	1164.422	1162.019	1164.654	1162.407	1164.654
<b>75.0</b>	974.252	974.392	971.555	976.019	977.430	976.019	971.555	974.392	974.516	974.392
<b>77.5</b>	790.639	787.648	784.331	791.414	792.716	791.414	784.331	787.648	789.074	787.648
<b>80.0</b>	608.018	608.514	605.213	608.948	610.638	608.948	605.213	608.514	605.523	608.514
<b>82.5</b>	429.567	434.279	429.846	432.388	435.907	432.388	429.846	434.279	430.574	434.279
<b>85.0</b>	257.873	268.320	262.446	266.894	268.041	266.894	262.446	268.320	265.871	268.320
<b>87.5</b>	106.237	112.514	106.872	110.887	112.654	110.887	106.872	112.514	109.244	112.514
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>92.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>95.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>97.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>100.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>102.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>105.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>107.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>110.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>112.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>115.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>117.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>120.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>122.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>125.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>127.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>130.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>132.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**CANDELA TABULATION - (Cont.)**

135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. 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>
0.0	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290	4821.290
2.5	4815.695	4815.369	4816.454	4815.369	4815.695	4813.773	4815.183
5.0	4799.451	4798.536	4799.606	4798.536	4799.451	4799.172	4799.280
7.5	4771.349	4769.954	4771.055	4769.954	4771.349	4773.535	4773.938
10.0	4733.405	4734.552	4733.529	4734.552	4733.405	4733.436	4732.925
12.5	4685.092	4682.472	4684.782	4682.472	4685.092	4686.146	4683.635
15.0	4624.983	4625.463	4625.572	4625.463	4624.983	4629.571	4624.177
17.5	4558.829	4554.969	4555.977	4554.969	4558.829	4558.349	4552.536
20.0	4477.407	4477.299	4478.554	4477.299	4477.407	4477.841	4475.532
22.5	4388.499	4387.430	4390.855	4387.430	4388.499	4391.010	4387.662
25.0	4288.633	4287.238	4291.020	4287.238	4288.633	4290.307	4285.424
27.5	4182.706	4180.691	4185.868	4180.691	4182.706	4183.249	4180.536
30.0	4068.982	4064.921	4071.323	4064.921	4068.982	4069.494	4058.303
32.5	3941.046	3941.154	3949.943	3941.154	3941.046	3943.618	3931.513
35.0	3808.862	3811.930	3816.255	3811.930	3808.862	3814.782	3800.026
37.5	3669.501	3668.478	3675.313	3668.478	3669.501	3671.640	3673.004
40.0	3521.894	3521.212	3526.824	3521.212	3521.894	3522.375	3534.946
42.5	3369.173	3369.111	3374.582	3369.111	3369.173	3373.280	3381.945
45.0	3209.492	3208.252	3216.172	3208.252	3209.492	3211.522	3217.784
47.5	3041.844	3042.309	3048.292	3042.309	3041.844	3044.851	3043.564
50.0	2867.608	2868.988	2873.777	2868.988	2867.608	2873.808	2872.150
52.5	2690.397	2690.040	2694.427	2690.040	2690.397	2696.054	2700.999
55.0	2508.985	2507.094	2510.845	2507.094	2508.985	2512.317	2520.408
57.5	2321.931	2322.814	2326.658	2322.814	2321.931	2326.209	2328.689
60.0	2132.924	2133.823	2137.528	2133.823	2132.924	2138.380	2134.706
62.5	1938.321	1943.483	1943.390	1943.483	1938.321	1943.979	1943.778
65.0	1742.464	1748.865	1748.462	1748.865	1742.464	1750.353	1753.856
67.5	1546.915	1549.535	1555.936	1549.535	1546.915	1554.278	1557.579
70.0	1354.839	1353.956	1359.164	1353.956	1354.839	1357.800	1355.289
72.5	1162.019	1164.422	1167.367	1164.422	1162.019	1164.654	1161.415
75.0	971.555	976.019	977.430	976.019	971.555	974.392	974.252
77.5	784.331	791.414	792.716	791.414	784.331	787.648	790.639
80.0	605.213	608.948	610.638	608.948	605.213	608.514	608.018

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

82.5	429.846	432.388	435.907	432.388	429.846	434.279	429.567
85.0	262.446	266.894	268.041	266.894	262.446	268.320	257.873
87.5	106.872	110.887	112.654	110.887	106.872	112.514	106.237
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1761.49	N.A.	12.70
0-30	3738.59	N.A.	26.90
0-40	6122.37	N.A.	44.00
0-60	10841.33	N.A.	78.00
0-80	13600.95	N.A.	97.80
0-90	13903.46	N.A.	100.00
10-90	13447.44	N.A.	96.70
20-40	4360.89	N.A.	31.40
20-50	6836.65	N.A.	49.20
40-70	6447.65	N.A.	46.40
60-80	2759.61	N.A.	19.80
70-80	1030.92	N.A.	7.40
80-90	302.51	N.A.	2.20
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	13903.46	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	456.02
10-20	1305.47
20-30	1977.1
30-40	2383.79
40-50	2475.77
50-60	2243.19
60-70	1728.69
70-80	1030.92
80-90	302.51
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	108	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : P4030-LED4-HO-FWA-D1.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	18.0	19.6	18.3	19.9	20.2	18.0	19.6	18.3	19.9	20.2
	3H	19.8	21.3	20.2	21.7	22.0	19.8	21.3	20.2	21.6	22.0
	4H	20.6	22.0	20.9	22.3	22.7	20.5	22.0	20.9	22.3	22.7
	6H	21.1	22.4	21.5	22.8	23.2	21.1	22.4	21.5	22.8	23.2
	8H	21.3	22.5	21.7	22.9	23.3	21.3	22.6	21.7	22.9	23.3
	12H	21.4	22.6	21.8	23.0	23.4	21.4	22.6	21.8	23.0	23.4

UGR Viewed Endwise

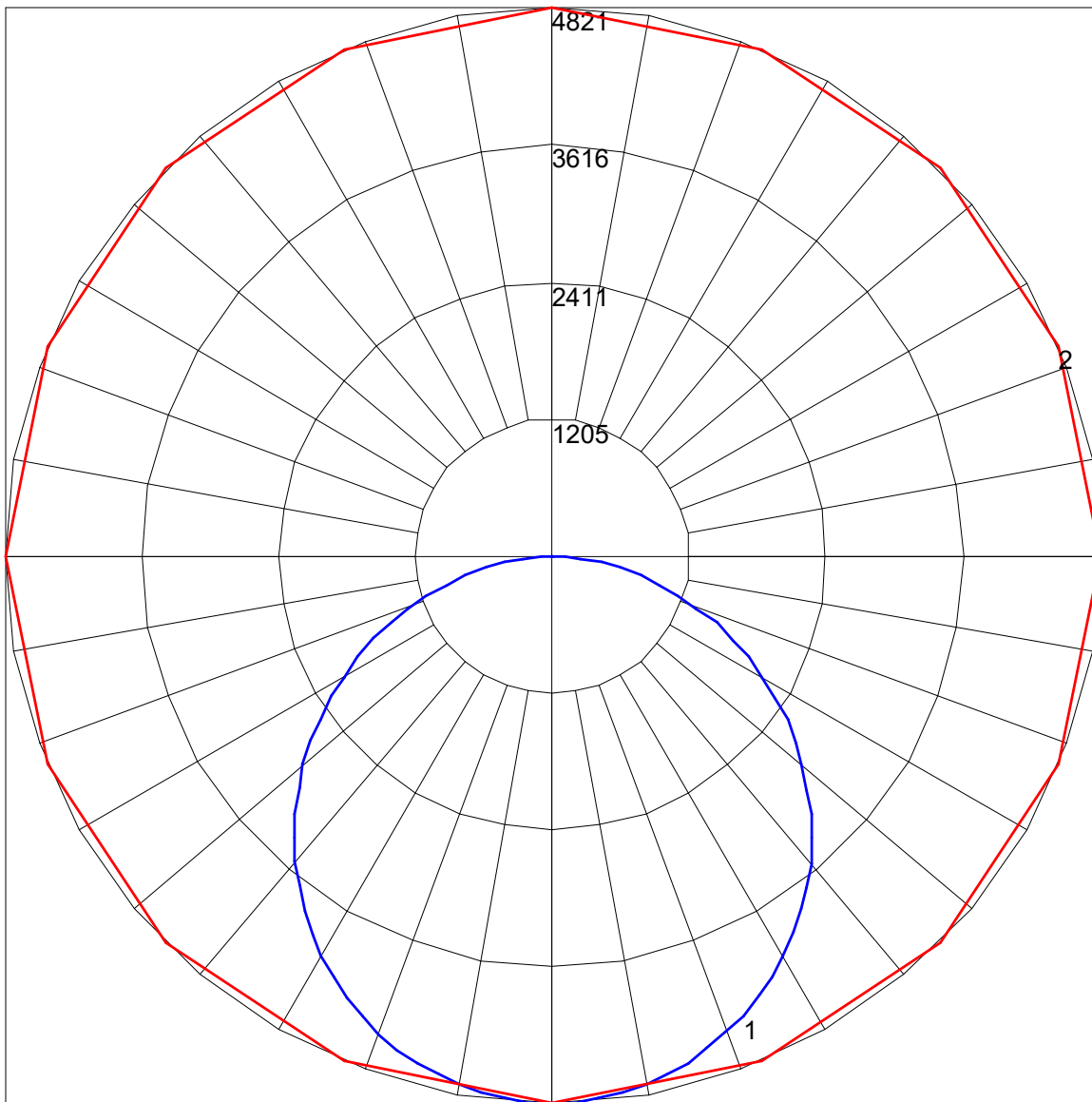
4H	2H	18.6	20.0	19.0	20.4	20.7	18.6	20.0	19.0	20.4	20.7
	3H	20.7	21.9	21.1	22.3	22.7	20.7	21.9	21.1	22.3	22.7
	4H	21.6	22.6	22.0	23.0	23.5	21.6	22.6	22.0	23.0	23.5
	6H	22.2	23.2	22.7	23.6	24.1	22.2	23.2	22.7	23.6	24.1
	8H	22.5	23.4	23.0	23.8	24.3	22.5	23.4	23.0	23.8	24.3
	12H	22.7	23.5	23.2	23.9	24.4	22.7	23.5	23.2	23.9	24.4

8H	4H	21.9	22.8	22.4	23.2	23.7	21.9	22.8	22.4	23.2	23.7
	6H	22.7	23.5	23.2	23.9	24.4	22.7	23.5	23.2	23.9	24.4
	8H	23.0	23.7	23.6	24.2	24.7	23.0	23.7	23.6	24.2	24.7
	12H	23.3	23.9	23.8	24.4	24.9	23.3	23.9	23.8	24.4	24.9

12H	4H	21.9	22.7	22.4	23.2	23.7	21.9	22.7	22.4	23.2	23.7
	6H	22.8	23.5	23.3	23.9	24.5	22.8	23.5	23.3	23.9	24.5
	8H	23.2	23.8	23.7	24.3	24.8	23.2	23.8	23.7	24.3	24.8

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 4821.29 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)