



IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S22-L32-940-AD-(L30)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM DI 22 3800
 [TESTLAB] Intertek
 [ISSUE DATE] 08 DECEMBER 2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] DIG-S22-L32-940-AD-(L30)-DIM-UNV
 [LUMINAIRE] RECESSED DIRECT INDIRECT LED LUMINAIRE
 [LAMP] HLM 90 CRI 4000K CCT
 [_SEARCH_SOURCE TYPE] LED
 [_SEARCH_APPLICATION] INDOOR, CLASSROOM, OFFICE
 [_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2658
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2748	2510	2254
55	2819	2440	2061
65	3072	2433	1862
75	2146	2257	1659
85	1800	1613	1417

IES INDOOR REPORT
PHOTOMETRIC FILENAME : DIG-S22-L32-940-AD-(L30)-DIM-UNV_.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>
0.0	925.974	925.974	925.974	925.974	925.974	925.974	925.974	925.974	925.974	925.974
2.5	927.261	926.546	924.186	923.900	923.542	923.042	923.256	925.902	927.189	925.902
5.0	925.116	924.329	921.826	920.968	919.895	919.109	920.038	923.185	925.044	923.185
7.5	920.753	919.967	917.035	915.176	913.388	912.315	914.389	918.823	921.183	918.823
10.0	914.318	913.173	909.813	906.666	904.306	903.091	906.452	912.530	915.676	912.530
12.5	906.380	904.664	899.873	898.300	894.724	894.009	896.226	904.378	908.311	904.378
15.0	896.583	894.224	890.076	882.782	877.633	877.919	885.142	893.937	899.229	893.937
17.5	885.714	882.568	876.346	866.692	860.972	860.900	871.627	882.067	888.360	882.067
20.0	873.486	869.124	858.898	849.173	842.236	842.665	853.249	867.980	876.132	867.980
22.5	859.685	853.892	841.164	828.578	820.140	820.998	834.728	852.748	862.116	852.748
25.0	844.239	837.803	821.999	806.339	796.327	797.686	815.349	836.158	846.455	836.158
27.5	827.291	819.639	800.189	781.811	770.369	773.087	793.395	817.852	829.436	817.852
30.0	808.555	799.402	777.091	755.138	742.695	746.342	770.012	797.758	810.844	797.758
32.5	788.175	777.163	752.206	726.892	713.448	717.953	744.912	775.590	789.820	775.590
35.0	766.579	753.922	725.891	697.215	682.556	688.134	718.382	751.205	767.223	751.205
37.5	743.267	729.037	698.145	667.039	649.876	656.813	690.279	725.819	743.410	725.819
40.0	718.382	702.793	669.112	633.858	615.766	623.418	661.318	699.575	718.883	699.575
42.5	692.567	675.691	638.792	601.608	581.156	589.737	631.570	672.974	693.497	672.974
45.0	666.180	647.373	608.401	567.784	546.474	556.414	599.820	645.872	667.897	645.872
47.5	638.578	619.127	576.436	533.316	511.434	522.232	568.427	616.768	641.367	616.768
50.0	610.546	589.308	544.043	498.563	475.751	487.693	536.677	587.949	612.906	587.949
52.5	581.943	558.917	511.863	463.738	440.283	453.154	505.070	558.702	584.946	558.702
55.0	554.197	529.026	479.827	429.056	405.243	418.687	473.677	529.669	558.273	529.669
57.5	527.381	499.707	447.791	394.803	370.418	384.791	442.356	501.423	533.245	501.423
60.0	501.566	471.175	415.612	361.050	336.094	351.468	411.107	474.107	509.790	474.107
62.5	474.750	442.857	383.790	327.942	302.556	318.931	380.215	447.577	483.903	447.577
65.0	445.074	412.322	352.541	295.262	269.733	287.396	349.752	417.471	454.441	417.471
67.5	398.521	376.568	321.291	263.583	237.554	256.218	319.003	380.858	404.743	380.858
70.0	316.286	321.005	288.182	232.477	206.447	225.898	285.322	322.936	321.649	322.936
72.5	233.621	242.774	249.210	201.728	176.342	195.435	245.420	243.632	232.548	243.632
75.0	190.358	189.214	200.226	171.050	147.166	164.900	195.506	183.064	185.209	183.064
77.5	148.596	150.742	149.740	139.729	119.063	133.722	143.305	143.948	142.375	143.948
80.0	111.268	111.125	113.914	107.264	91.889	101.686	107.979	105.262	106.120	105.262
82.5	81.735	79.447	79.590	75.657	66.361	71.295	74.513	74.727	76.944	74.727
85.0	53.775	50.843	48.197	46.553	42.333	45.623	47.554	49.270	51.630	49.270
87.5	27.317	25.743	23.241	22.883	21.095	21.953	22.168	23.670	24.456	23.670
90.0	0.000	0.000	0.000	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	0.000	0.000	0.000
95.0	0.000	0.000	0.000	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	0.000	0.000	0.000
100.0	0.000	0.000	0.000	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	0.000	0.000	0.000
105.0	0.000	0.000	0.000	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	0.000	0.000	0.000
110.0	0.000	0.000	0.000	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	0.000	0.000	0.000
115.0	0.000	0.000	0.000	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	0.000	0.000	0.000
120.0	0.000	0.000	0.000	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	0.000	0.000	0.000
125.0	0.000	0.000	0.000	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	0.000	0.000	0.000
130.0	0.000	0.000	0.000	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	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : DIG-S22-L32-940-AD-(L30)-DIM-UNV_.IES

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. 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>
0.0	925.974	925.974	925.974	925.974	925.974	925.974	925.974
2.5	923.256	923.042	923.542	923.900	924.186	926.546	927.261
5.0	920.038	919.109	919.895	920.968	921.826	924.329	925.116
7.5	914.389	912.315	913.388	915.176	917.035	919.967	920.753
10.0	906.452	903.091	904.306	906.666	909.813	913.173	914.318
12.5	896.226	894.009	894.724	898.300	899.873	904.664	906.380
15.0	885.142	877.919	877.633	882.782	890.076	894.224	896.583
17.5	871.627	860.900	860.972	866.692	876.346	882.568	885.714
20.0	853.249	842.665	842.236	849.173	858.898	869.124	873.486
22.5	834.728	820.998	820.140	828.578	841.164	853.892	859.685
25.0	815.349	797.686	796.327	806.339	821.999	837.803	844.239
27.5	793.395	773.087	770.369	781.811	800.189	819.639	827.291
30.0	770.012	746.342	742.695	755.138	777.091	799.402	808.555
32.5	744.912	717.953	713.448	726.892	752.206	777.163	788.175
35.0	718.382	688.134	682.556	697.215	725.891	753.922	766.579
37.5	690.279	656.813	649.876	667.039	698.145	729.037	743.267
40.0	661.318	623.418	615.766	633.858	669.112	702.793	718.382
42.5	631.570	589.737	581.156	601.608	638.792	675.691	692.567
45.0	599.820	556.414	546.474	567.784	608.401	647.373	666.180
47.5	568.427	522.232	511.434	533.316	576.436	619.127	638.578
50.0	536.677	487.693	475.751	498.563	544.043	589.308	610.546
52.5	505.070	453.154	440.283	463.738	511.863	558.917	581.943
55.0	473.677	418.687	405.243	429.056	479.827	529.026	554.197
57.5	442.356	384.791	370.418	394.803	447.791	499.707	527.381
60.0	411.107	351.468	336.094	361.050	415.612	471.175	501.566
62.5	380.215	318.931	302.556	327.942	383.790	442.857	474.750
65.0	349.752	287.396	269.733	295.262	352.541	412.322	445.074
67.5	319.003	256.218	237.554	263.583	321.291	376.568	398.521
70.0	285.322	225.898	206.447	232.477	288.182	321.005	316.286
72.5	245.420	195.435	176.342	201.728	249.210	242.774	233.621
75.0	195.506	164.900	147.166	171.050	200.226	189.214	190.358
77.5	143.305	133.722	119.063	139.729	149.740	150.742	148.596
80.0	107.979	101.686	91.889	107.264	113.914	111.125	111.268

IES INDOOR REPORT
PHOTOMETRIC FILENAME : DIG-S22-L32-940-AD-(L30)-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

82.5	74.513	71.295	66.361	75.657	79.590	79.447	81.735
85.0	47.554	45.623	42.333	46.553	48.197	50.843	53.775
87.5	22.168	21.953	21.095	22.883	23.241	25.743	27.317
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
PHOTOMETRIC FILENAME : DIG-S22-L32-940-AD-(L30)-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	337.98	N.A.	12.70
0-30	715.59	N.A.	26.90
0-40	1167.79	N.A.	43.90
0-60	2062.32	N.A.	77.60
0-80	2603.69	N.A.	98.00
0-90	2657.92	N.A.	100.00
10-90	2570.34	N.A.	96.70
20-40	829.81	N.A.	31.20
20-50	1296.55	N.A.	48.80
40-70	1242.26	N.A.	46.70
60-80	541.36	N.A.	20.40
70-80	193.63	N.A.	7.30
80-90	54.23	N.A.	2.00
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	2657.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	87.58
10-20	250.40
20-30	377.61
30-40	452.20
40-50	466.73
50-60	427.80
60-70	347.73
70-80	193.63
80-90	54.23
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 : DIG-S22-L32-940-AD-(L30)-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	111	111	111	106	106	106	102	102	102	100
1	109	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	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	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	33	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 : DIG-S22-L32-940-AD-(L30)-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	16.2	17.8	16.5	18.1	18.4	UGR Viewed Endwise	14.3	15.9	14.6	16.2	16.6
	3H	18.4	19.9	18.8	20.2	20.6		16.0	17.5	16.4	17.9	18.2
	4H	18.9	20.3	19.3	20.7	21.1		16.7	18.1	17.1	18.5	18.9
	6H	19.3	20.6	19.7	21.0	21.4		17.2	18.6	17.7	18.9	19.3
	8H	19.5	20.7	19.9	21.1	21.5		17.4	18.7	17.8	19.1	19.5
	12H	19.5	20.7	20.0	21.1	21.6		17.5	18.7	18.0	19.1	19.5

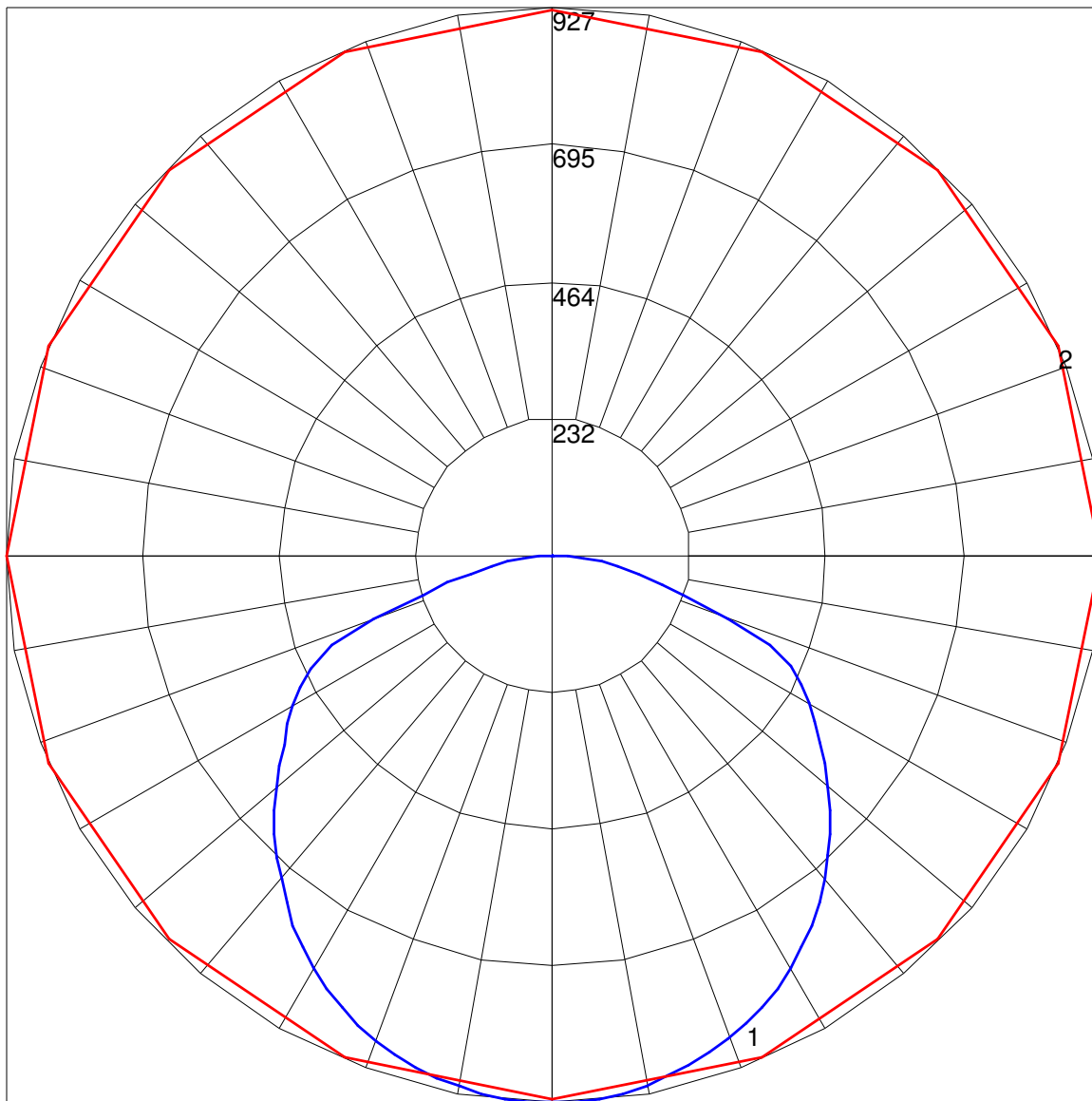
4H	2H	16.7	18.1	17.1	18.5	18.8	15.3	16.7	15.7	17.0	17.4
	3H	19.1	20.3	19.5	20.7	21.1	17.3	18.4	17.7	18.8	19.2
	4H	19.8	20.9	20.2	21.3	21.7	18.0	19.1	18.5	19.5	20.0
	6H	20.3	21.2	20.7	21.7	22.1	18.7	19.6	19.1	20.1	20.5
	8H	20.5	21.4	21.0	21.8	22.3	18.9	19.8	19.4	20.2	20.7
	12H	20.6	21.4	21.1	21.9	22.4	19.1	19.8	19.5	20.3	20.8

8H	4H	20.1	20.9	20.5	21.4	21.8	18.5	19.4	19.0	19.8	20.3
	6H	20.7	21.4	21.2	21.9	22.4	19.3	20.0	19.8	20.5	21.0
	8H	20.9	21.6	21.4	22.1	22.6	19.6	20.2	20.1	20.7	21.2
	12H	21.1	21.7	21.6	22.2	22.8	19.8	20.4	20.3	20.9	21.4

12H	4H	20.1	20.9	20.6	21.3	21.8	18.6	19.4	19.1	19.8	20.3
	6H	20.7	21.4	21.2	21.9	22.4	19.4	20.0	19.9	20.5	21.0
	8H	21.0	21.6	21.5	22.1	22.7	19.7	20.3	20.2	20.8	21.3

Maximum UGR = 22.8

POLAR GRAPH



Maximum Candela = 927.261 Located At Horizontal Angle = 0, Vertical Angle = 2.5

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)