



IES INDOOR REPORT

PHOTOMETRIC FILENAME : OSA6R-L20-835-AC-XX-XXX-XXX-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] GEN From INTERTEK T EST
 [TESTLAB]Intertek
 [ISSUEDATE] 18 OCT 2021
 [MANUFAC] WILLIAMS OUTDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMCAT]OSA6R-L19-835-AC-xx-xxx-xx-DIM-UNV
 [LUMINAIRE] LED 835cct
 [LAMP]LED. LUMINAIRE
 [_SEARCH_SOURCE]TYPE]LED
 [_SEARCH_APPLICATION]OUTDOOR,AREA,SIDEWALK,SECURITY
 [_SEARCH_MOUNTING]GROUND

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1944
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	27.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.02
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	0.02
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.00 ft
Luminous Width (90-270)	0.50 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	20243	21334	22098
55	31684	34472	36990
65	60928	60145	58057
75	70472	68853	65870
85	66553	74397	73258

IES INDOOR REPORT
PHOTOMETRIC FILENAME : OSA6R-L20-835-AC-XX-XXX-XXX-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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7.5	56.981	42.887	43.491	46.310	79.129	83.156	84.163	95.237	96.646	95.237
10.0	150.808	152.217	150.405	162.083	172.352	170.137	172.755	172.956	171.748	172.956
12.5	180.809	188.862	187.252	200.339	197.520	199.131	204.769	201.144	192.688	201.144
15.0	184.030	191.480	199.936	203.359	207.386	200.540	207.588	204.366	198.527	204.366
17.5	185.037	192.688	198.728	201.144	195.104	184.634	191.681	187.654	183.829	187.654
20.0	171.547	178.996	184.030	187.856	185.641	184.030	189.869	185.439	183.023	185.439
22.5	169.130	176.983	181.614	188.258	188.460	180.809	183.829	179.198	177.184	179.198
25.0	169.735	179.399	186.044	191.883	183.426	182.017	180.607	176.782	172.151	176.782
27.5	162.889	178.392	188.057	191.480	187.050	189.265	188.661	184.030	179.600	184.030
30.0	162.687	179.198	193.292	202.353	202.957	209.400	208.997	201.748	195.507	201.748
32.5	183.023	202.151	216.245	226.313	229.132	235.776	238.192	233.561	226.715	233.561
35.0	213.024	235.776	244.635	250.273	256.917	258.729	264.971	259.937	251.481	259.937
37.5	247.454	270.206	273.025	276.448	281.079	274.636	279.669	275.642	268.998	275.642
40.0	262.152	281.079	279.669	284.703	285.911	276.649	279.468	276.045	271.817	276.045
42.5	260.139	274.837	275.642	285.307	285.307	277.052	277.253	272.220	267.387	272.220
45.0	261.347	271.817	275.441	287.119	285.307	277.857	278.663	273.629	270.005	273.629
47.5	267.387	274.434	282.085	293.562	296.784	296.784	296.784	287.119	282.488	287.119
50.0	277.253	288.529	298.797	309.468	321.348	323.361	327.187	317.724	310.475	317.724
52.5	300.005	315.509	323.361	334.838	353.362	358.798	365.845	361.416	351.751	361.416
55.0	331.818	352.758	361.013	371.282	387.389	395.242	406.719	408.933	397.658	408.933
57.5	368.463	395.644	398.665	404.705	419.001	427.256	444.370	448.800	437.323	448.800
60.0	401.886	431.283	433.699	436.316	446.384	452.424	470.948	480.814	477.995	480.814
62.5	437.122	457.860	457.659	452.424	455.042	457.055	480.210	498.935	501.955	498.935
65.0	470.142	473.968	464.102	448.598	447.994	447.592	471.753	490.680	500.948	490.680
67.5	482.022	467.324	455.243	437.726	440.947	435.310	451.619	458.062	463.095	458.062
70.0	451.216	438.934	433.900	418.598	415.175	401.081	404.504	405.712	409.537	405.712
72.5	401.081	387.792	386.181	374.302	367.657	350.342	344.503	340.677	342.288	340.677
75.0	333.026	324.771	325.375	318.126	311.281	293.965	282.085	274.233	270.609	274.233
77.5	266.179	261.146	265.374	262.756	255.911	236.581	221.682	211.413	208.796	211.413
80.0	203.561	203.158	209.601	211.212	203.561	186.446	170.741	159.466	156.647	159.466
82.5	151.009	151.613	160.674	165.104	158.056	142.754	128.257	117.385	113.760	117.385
85.0	105.908	109.733	118.391	123.626	116.579	104.700	94.230	85.572	82.753	85.572
87.5	74.095	77.317	84.163	88.995	82.954	74.095	66.645	60.605	58.592	60.605
90.0	49.128	51.343	55.974	59.196	54.363	48.122	44.095	40.873	39.665	40.873
92.5	37.652	39.665	41.679	42.685	41.880	40.269	39.262	38.457	38.256	38.457
95.0	47.518	47.920	48.726	48.122	46.712	45.303	44.699	44.296	44.095	44.296
97.5	51.746	51.947	51.545	50.940	49.128	48.323	47.719	47.719	47.518	47.719
100.0	54.766	54.967	54.766	54.565	52.551	51.142	49.531	48.927	48.726	48.927
102.5	47.920	47.719	48.323	48.927	46.914	45.303	43.491	42.484	42.283	42.484
105.0	41.477	41.880	42.283	43.088	42.887	41.679	40.068	39.464	39.262	39.464
107.5	39.061	39.464	40.269	41.679	42.283	41.276	39.464	38.457	38.256	38.457
110.0	38.054	38.658	40.269	42.081	42.081	40.672	39.061	38.054	37.853	38.054
112.5	37.048	37.853	38.457	38.457	36.846	35.638	35.638	35.437	35.638	35.437
115.0	33.222	33.625	33.625	34.027	33.826	33.826	33.625	33.222	33.423	33.222
117.5	32.014	32.417	32.819	33.423	33.625	33.423	32.819	32.417	32.417	32.417
120.0	30.605	30.806	31.410	31.611	31.410	31.410	31.410	31.410	31.410	31.410
122.5	29.195	29.598	29.799	30.001	29.598	30.001	30.202	30.403	30.403	30.403
125.0	27.786	28.188	28.390	28.390	28.390	28.792	28.994	28.994	28.994	28.994
127.5	26.376	26.578	26.779	26.779	26.779	27.182	27.383	27.584	27.584	27.584
130.0	24.766	24.967	25.168	25.168	25.168	25.571	25.772	25.974	25.974	25.974
132.5	22.953	23.356	23.356	23.356	23.557	23.960	24.161	24.363	24.161	24.363

IES INDOOR REPORT
PHOTOMETRIC FILENAME : OSA6R-L20-835-AC-XX-XXX-XXX-DIM-UNV_.IES

CANDELA TABULATION - (Cont.)

135.0	21.141	21.343	21.544	21.544	21.544	22.148	22.551	22.551	22.551	22.551
137.5	19.329	19.329	19.531	19.531	19.732	20.135	20.537	20.537	20.537	20.537
140.0	17.517	17.718	17.920	17.920	17.920	17.920	18.121	18.322	18.322	18.322
142.5	15.705	15.705	15.906	15.906	15.906	15.906	16.108	16.108	16.309	16.108
145.0	13.692	13.692	13.893	13.893	13.893	13.893	14.094	14.296	14.296	14.296
147.5	11.879	11.879	11.879	11.879	11.879	11.879	12.081	12.282	12.282	12.282
150.0	9.866	9.866	9.866	9.866	9.866	10.067	10.269	10.470	10.470	10.470
152.5	7.852	7.852	7.852	7.852	8.054	8.255	8.457	8.658	8.859	8.658
155.0	6.242	6.242	6.242	6.040	6.242	6.644	6.644	6.846	7.047	6.846
157.5	4.631	4.631	4.631	4.430	4.631	4.832	5.034	5.235	5.235	5.235
160.0	3.222	3.020	3.020	2.819	2.819	3.020	3.222	3.423	3.624	3.423
162.5	1.611	1.611	1.611	1.409	1.208	1.409	1.611	1.812	1.812	1.812
165.0	0.201	0.201	0.000	0.000	0.403	0.000	0.000	0.403	0.403	0.403
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7.5	84.163	83.156	79.129	46.310	43.491	42.887	56.981
10.0	172.755	170.137	172.352	162.083	150.405	152.217	150.808
12.5	204.769	199.131	197.520	200.339	187.252	188.862	180.809
15.0	207.588	200.540	207.386	203.359	199.936	191.480	184.030
17.5	191.681	184.634	195.104	201.144	198.728	192.688	185.037
20.0	189.869	184.030	185.641	187.856	184.030	178.996	171.547
22.5	183.829	180.809	188.460	188.258	181.614	176.983	169.130
25.0	180.607	182.017	183.426	191.883	186.044	179.399	169.735
27.5	188.661	189.265	187.050	191.480	188.057	178.392	162.889
30.0	208.997	209.400	202.957	202.353	193.292	179.198	162.687
32.5	238.192	235.776	229.132	226.313	216.245	202.151	183.023
35.0	264.971	258.729	256.917	250.273	244.635	235.776	213.024
37.5	279.669	274.636	281.079	276.448	273.025	270.206	247.454
40.0	279.468	276.649	285.911	284.703	279.669	281.079	262.152
42.5	277.253	277.052	285.307	285.307	275.642	274.837	260.139
45.0	278.663	277.857	285.307	287.119	275.441	271.817	261.347
47.5	296.784	296.784	296.784	293.562	282.085	274.434	267.387
50.0	327.187	323.361	321.348	309.468	298.797	288.529	277.253
52.5	365.845	358.798	353.362	334.838	323.361	315.509	300.005
55.0	406.719	395.242	387.389	371.282	361.013	352.758	331.818
57.5	444.370	427.256	419.001	404.705	398.665	395.644	368.463
60.0	470.948	452.424	446.384	436.316	433.699	431.283	401.886
62.5	480.210	457.055	455.042	452.424	457.659	457.860	437.122
65.0	471.753	447.592	447.994	448.598	464.102	473.968	470.142
67.5	451.619	435.310	440.947	437.726	455.243	467.324	482.022
70.0	404.504	401.081	415.175	418.598	433.900	438.934	451.216
72.5	344.503	350.342	367.657	374.302	386.181	387.792	401.081
75.0	282.085	293.965	311.281	318.126	325.375	324.771	333.026
77.5	221.682	236.581	255.911	262.756	265.374	261.146	266.179
80.0	170.741	186.446	203.561	211.212	209.601	203.158	203.561

IES INDOOR REPORT**PHOTOMETRIC FILENAME : OSA6R-L20-835-AC-XX-XXX-XXX-DIM-UNV_.IES****CANDELA TABULATION - (Cont.)**

82.5	128.257	142.754	158.056	165.104	160.674	151.613	151.009
85.0	94.230	104.700	116.579	123.626	118.391	109.733	105.908
87.5	66.645	74.095	82.954	88.995	84.163	77.317	74.095
90.0	44.095	48.122	54.363	59.196	55.974	51.343	49.128
92.5	39.262	40.269	41.880	42.685	41.679	39.665	37.652
95.0	44.699	45.303	46.712	48.122	48.726	47.920	47.518
97.5	47.719	48.323	49.128	50.940	51.545	51.947	51.746
100.0	49.531	51.142	52.551	54.565	54.766	54.967	54.766
102.5	43.491	45.303	46.914	48.927	48.323	47.719	47.920
105.0	40.068	41.679	42.887	43.088	42.283	41.880	41.477
107.5	39.464	41.276	42.283	41.679	40.269	39.464	39.061
110.0	39.061	40.672	42.081	42.081	40.269	38.658	38.054
112.5	35.638	35.638	36.846	38.457	38.457	37.853	37.048
115.0	33.625	33.826	33.826	34.027	33.625	33.625	33.222
117.5	32.819	33.423	33.625	33.423	32.819	32.417	32.014
120.0	31.410	31.410	31.410	31.611	31.410	30.806	30.605
122.5	30.202	30.001	29.598	30.001	29.799	29.598	29.195
125.0	28.994	28.792	28.390	28.390	28.390	28.188	27.786
127.5	27.383	27.182	26.779	26.779	26.779	26.578	26.376
130.0	25.772	25.571	25.168	25.168	25.168	24.967	24.766
132.5	24.161	23.960	23.557	23.356	23.356	23.356	22.953
135.0	22.551	22.148	21.544	21.544	21.544	21.343	21.141
137.5	20.537	20.135	19.732	19.531	19.531	19.329	19.329
140.0	18.121	17.920	17.920	17.920	17.920	17.718	17.517
142.5	16.108	15.906	15.906	15.906	15.906	15.705	15.705
145.0	14.094	13.893	13.893	13.893	13.893	13.692	13.692
147.5	12.081	11.879	11.879	11.879	11.879	11.879	11.879
150.0	10.269	10.067	9.866	9.866	9.866	9.866	9.866
152.5	8.457	8.255	8.054	7.852	7.852	7.852	7.852
155.0	6.644	6.644	6.242	6.040	6.242	6.242	6.242
157.5	5.034	4.832	4.631	4.430	4.631	4.631	4.631
160.0	3.222	3.020	2.819	2.819	3.020	3.020	3.222
162.5	1.611	1.409	1.208	1.409	1.611	1.611	1.611
165.0	0.000	0.000	0.403	0.000	0.000	0.201	0.201
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 : OSA6R-L20-835-AC-XX-XXX-XXX-DIM-UNV_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	60.07	N.A.	3.10
0-30	145.65	N.A.	7.50
0-40	301.48	N.A.	15.50
0-60	863.92	N.A.	44.40
0-80	1636.21	N.A.	84.20
0-90	1757.6	N.A.	90.40
10-90	1751.71	N.A.	90.10
20-40	241.41	N.A.	12.40
20-50	461.57	N.A.	23.70
40-70	1013.52	N.A.	52.10
60-80	772.30	N.A.	39.70
70-80	321.21	N.A.	16.50
80-90	121.39	N.A.	6.20
90-110	97.09	N.A.	5.00
90-120	131.62	N.A.	6.80
90-130	157.20	N.A.	8.10
90-150	183.04	N.A.	9.40
90-180	186.41	N.A.	9.60
110-180	89.33	N.A.	4.60
0-180	1944.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	5.89
10-20	54.18
20-30	85.58
30-40	155.84
40-50	220.16
50-60	342.28
60-70	451.08
70-80	321.21
80-90	121.39
90-100	51.09
100-110	46.00
110-120	34.53
120-130	25.59
130-140	16.96
140-150	8.87
150-160	3.10
160-170	0.28
170-180	0.00

IES INDOOR REPORT

PHOTOMETRIC FILENAME : OSA6R-L20-835-AC-XX-XXX-XXX-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	235	235	235	235	227	227	227	227	213	213	213	200	200	200	188	188	188	182
1	204	190	178	167	196	184	172	162	171	162	153	160	152	145	149	143	137	131
2	179	156	137	122	171	150	133	119	139	125	113	130	118	107	120	110	102	95
3	158	130	109	92	150	125	106	90	116	99	85	107	93	81	99	87	77	71
4	141	111	89	72	134	107	86	70	99	81	67	91	76	63	84	71	60	54
5	127	96	74	57	121	92	71	56	85	67	53	79	63	51	73	59	48	43
6	116	84	62	47	110	81	61	46	75	57	44	69	54	42	64	50	40	34
7	106	74	54	39	101	72	52	38	67	49	37	62	46	35	57	44	33	28
8	98	67	47	33	93	64	46	33	60	43	31	56	41	30	52	38	28	24
9	91	60	41	29	87	58	40	28	54	38	27	51	36	26	47	34	24	20
10	85	55	37	25	81	53	36	25	50	34	24	46	32	22	43	31	21	17

IES INDOOR REPORT

PHOTOMETRIC FILENAME : OSA6R-L20-835-AC-XX-XXX-XXX-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

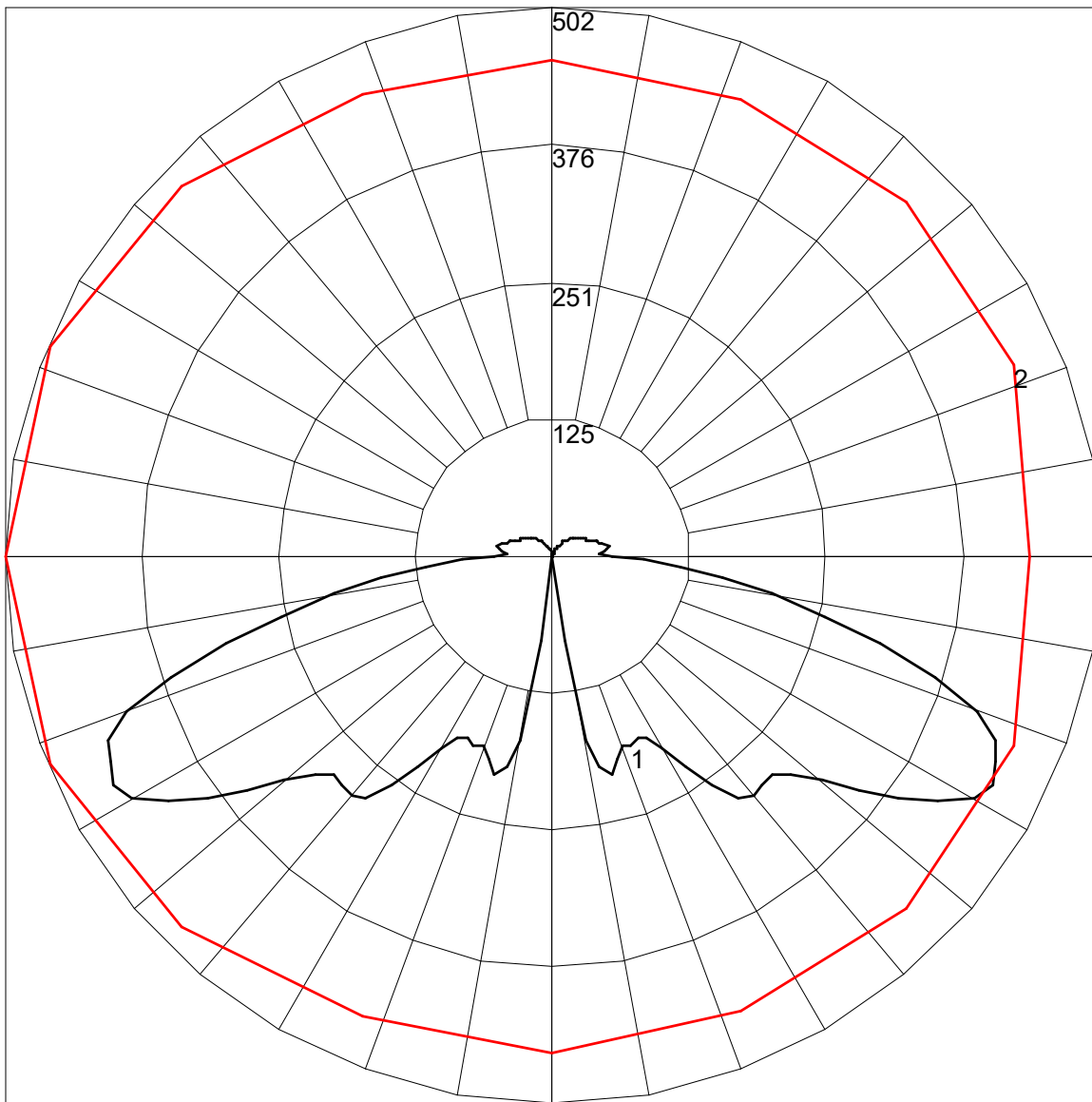
X=2H	Y=2H	21.8	23.5	22.3	24.0	24.6	22.2	23.9	22.7	24.4	25.0
	3H	26.1	27.7	26.6	28.2	28.8	25.9	27.5	26.4	28.0	28.6
	4H	27.5	29.0	28.0	29.5	30.1	27.1	28.7	27.7	29.2	29.8
	6H	28.3	29.8	28.9	30.3	30.9	28.0	29.5	28.6	30.0	30.6
	8H	28.6	30.0	29.2	30.6	31.2	28.4	29.8	28.9	30.3	30.9
	12H	28.9	30.2	29.5	30.8	31.4	28.7	30.0	29.3	30.6	31.2

UGR Viewed Endwise

4H	2H	23.3	24.8	23.8	25.4	26.0	23.6	25.1	24.1	25.7	26.3
	3H	27.4	28.8	28.0	29.3	30.0	27.2	28.5	27.7	29.1	29.7
	4H	28.8	30.0	29.4	30.6	31.3	28.5	29.7	29.1	30.3	30.9
	6H	29.8	30.9	30.4	31.5	32.1	29.5	30.6	30.1	31.2	31.9
	8H	30.2	31.2	30.7	31.8	32.5	29.9	30.9	30.5	31.6	32.2
	12H	30.5	31.4	31.1	32.0	32.7	30.3	31.2	30.9	31.9	32.5
8H	4H	29.3	30.4	29.9	31.0	31.6	29.0	30.0	29.6	30.6	31.3
	6H	30.5	31.3	31.1	32.0	32.7	30.2	31.0	30.8	31.7	32.4
	8H	31.0	31.7	31.6	32.4	33.1	30.7	31.5	31.3	32.1	32.8
	12H	31.4	32.1	32.0	32.7	33.5	31.2	31.9	31.9	32.5	33.3
12H	4H	29.4	30.4	30.0	31.0	31.7	29.1	30.0	29.7	30.6	31.3
	6H	30.6	31.4	31.3	32.0	32.8	30.3	31.1	31.0	31.7	32.5
	8H	31.2	31.8	31.8	32.5	33.2	30.9	31.6	31.5	32.2	33.0

Maximum UGR = 33.5

POLAR GRAPH



Maximum Candela = 501.955 Located At Horizontal Angle = 180, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)