



IES INDOOR REPORT

PHOTOMETRIC FILENAME : OSA6S-L20-835-AC-XX-XXX-XXX-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] GEN from INTERTEK TEST
 [TESTLAB] Intertek
 [ISSUE DATE] 18 OCT 2021
 [MANUFAC] WILLIAMS OUTDOOR
 [LUMCAT] OSA6S-L20-835-AC-xx-xxx-xx-DIM-UNV
 [LUMINAIRE] LED 835cct

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2045
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	27.1
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	0.02
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	0.02
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.50 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	17782	19581	16528
55	27552	30805	26371
65	50439	53091	49113
75	51071	53592	48679
85	52986	53562	50106

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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>	<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	0.194	14.392	17.504	3.695	11.280	33.841	11.280
7.5	46.871	28.395	9.530	32.285	77.406	58.346	27.617	81.684	117.859	81.684
10.0	128.556	77.989	29.951	88.686	140.030	93.743	42.398	121.360	183.595	121.360
12.5	198.765	110.663	35.008	117.664	173.871	110.468	44.148	138.280	208.879	138.280
15.0	216.658	130.306	38.508	132.251	183.595	125.249	47.260	145.282	189.625	145.282
17.5	218.214	151.116	43.371	149.366	176.594	140.419	51.539	160.257	186.318	160.257
20.0	201.294	166.481	49.983	166.675	173.677	156.562	60.096	170.176	177.761	170.176
22.5	189.430	181.651	59.513	174.066	174.844	171.732	74.683	178.733	174.455	178.733
25.0	189.819	196.821	77.017	184.568	174.260	187.096	97.243	189.819	177.761	189.819
27.5	191.180	207.323	100.355	194.487	183.401	204.017	125.638	202.655	186.513	202.655
30.0	197.210	221.715	133.223	218.214	211.213	232.801	163.952	228.133	211.407	228.133
32.5	231.828	258.278	185.929	255.167	251.082	269.753	219.770	265.280	247.776	265.280
35.0	271.892	297.759	253.027	294.064	284.340	295.425	268.586	292.314	276.171	292.314
37.5	300.871	326.543	303.594	313.707	291.730	303.205	295.036	301.649	283.756	301.649
40.0	311.179	334.517	322.848	312.151	283.367	297.370	303.205	297.370	275.393	297.370
42.5	300.093	324.015	322.459	303.010	274.032	292.508	307.095	291.147	267.419	291.147
45.0	292.314	317.597	321.875	297.370	271.698	293.480	314.096	292.897	268.781	292.897
47.5	298.148	319.931	326.738	299.704	274.032	300.676	327.127	298.537	272.670	298.537
50.0	315.263	334.517	344.436	312.540	289.202	319.542	349.298	312.929	288.035	312.929
52.5	340.352	360.384	371.859	336.462	314.485	346.575	379.444	338.407	313.124	338.407
55.0	367.385	392.280	410.756	370.886	351.632	384.306	418.924	373.414	348.131	373.414
57.5	402.587	432.538	458.405	411.728	396.947	422.036	461.517	412.312	392.474	412.312
60.0	438.956	463.267	498.080	447.708	439.734	453.932	492.829	444.791	427.676	444.791
62.5	472.797	491.662	523.947	475.909	472.214	475.325	510.917	474.937	461.128	474.937
65.0	495.552	509.944	521.613	488.940	482.522	478.826	507.610	488.745	478.632	488.745
67.5	483.299	494.385	489.912	475.131	462.295	458.600	488.551	469.296	454.126	469.296
70.0	439.734	454.515	448.875	436.428	414.451	415.229	448.097	423.009	404.921	423.009
72.5	377.693	397.336	394.030	379.055	354.160	359.995	395.391	365.052	349.687	365.052
75.0	307.289	327.516	322.459	315.068	292.897	298.537	322.264	299.898	286.090	299.898
77.5	243.303	259.640	242.914	252.444	235.329	240.580	251.082	237.857	226.771	237.857
80.0	189.625	201.683	183.595	197.793	182.623	187.291	192.347	185.151	176.205	185.151
82.5	145.282	154.033	140.808	153.256	137.113	141.975	144.893	138.669	128.556	138.669
85.0	107.357	114.942	108.524	115.720	101.522	104.828	107.940	103.078	95.882	103.078
87.5	79.351	83.824	81.684	84.991	73.710	76.044	78.767	74.683	68.265	74.683
90.0	53.095	57.568	57.957	58.346	50.178	52.900	55.234	51.733	45.121	51.733
92.5	35.008	40.259	42.787	41.426	36.952	42.204	44.537	42.204	35.786	42.204
95.0	35.008	40.842	43.565	42.204	37.730	43.565	46.093	43.760	37.730	43.760
97.5	38.314	44.537	47.844	45.899	41.037	47.649	50.178	48.038	42.009	48.038
100.0	42.593	48.816	51.733	50.372	45.315	51.733	53.095	51.733	46.482	51.733
102.5	46.288	51.539	53.484	52.706	47.455	52.900	54.456	53.289	48.622	53.289
105.0	46.871	52.511	54.456	53.289	48.427	53.678	55.818	54.456	50.761	54.456
107.5	48.233	53.289	55.234	53.873	49.594	53.873	56.790	55.234	52.706	55.234
110.0	49.400	53.289	55.623	53.873	50.372	53.678	57.374	55.429	53.484	55.429
112.5	49.011	52.317	55.429	52.317	47.844	51.344	55.623	52.706	49.594	52.706
115.0	45.704	50.567	53.678	51.150	45.899	50.956	53.484	52.511	49.205	52.511
117.5	45.315	50.178	51.344	50.761	46.677	49.789	51.150	50.567	48.622	50.567
120.0	43.760	47.844	49.400	48.038	44.148	47.455	49.400	48.622	60.096	48.622
122.5	41.037	45.704	48.038	45.510	42.398	45.510	48.038	46.093	104.050	46.093
125.0	38.897	43.954	46.482	43.760	39.092	43.954	46.677	44.148	43.176	44.148
127.5	37.536	42.593	45.121	42.204	37.536	42.398	45.121	42.398	37.536	42.398
130.0	36.175	40.842	43.371	40.453	36.175	40.842	43.371	40.842	35.980	40.842
132.5	34.813	39.092	41.620	38.897	34.424	39.092	41.426	38.897	34.424	38.897

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CANDELA TABULATION - (Cont.)

135.0	32.868	37.147	39.675	36.952	33.063	37.147	39.481	36.952	32.674	36.952
137.5	31.312	35.202	37.536	35.008	31.507	35.008	37.341	34.813	30.340	34.813
140.0	29.756	32.868	35.202	32.868	29.173	32.674	35.008	32.479	28.201	32.479
142.5	27.617	30.729	32.868	30.534	27.034	30.340	32.674	30.145	26.450	30.145
145.0	25.283	28.201	30.145	28.201	25.089	28.006	30.340	27.812	24.311	27.812
147.5	23.144	25.672	27.617	25.867	22.755	25.478	27.617	25.283	22.171	25.283
150.0	20.421	23.144	24.894	23.338	20.616	22.949	24.894	22.949	20.421	22.949
152.5	18.282	20.616	22.366	20.810	18.671	20.616	21.977	20.421	18.087	20.421
155.0	16.142	18.087	19.449	18.282	16.337	17.893	19.254	17.893	15.559	17.893
157.5	14.003	15.559	16.726	15.559	14.198	15.364	16.337	15.364	13.420	15.364
160.0	11.864	12.836	13.809	13.031	11.864	13.031	13.614	13.031	11.086	13.031
162.5	9.724	10.502	11.086	10.502	9.530	10.502	10.891	10.502	9.141	10.502
165.0	7.585	8.168	8.363	8.168	7.196	7.974	8.363	7.974	7.196	7.974
167.5	5.057	5.835	6.029	5.835	5.446	5.835	5.835	5.835	5.251	5.835
170.0	3.306	3.890	3.890	3.695	3.695	3.695	3.890	3.890	3.112	3.890
172.5	1.750	2.139	2.139	2.139	1.945	2.139	1.945	2.139	1.556	2.139
175.0	0.389	0.583	0.583	0.778	0.583	0.778	0.583	0.583	0.194	0.583
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	3.695	17.504	14.392	0.194	0.000	0.000	0.000
7.5	27.617	58.346	77.406	32.285	9.530	28.395	46.871
10.0	42.398	93.743	140.030	88.686	29.951	77.989	128.556
12.5	44.148	110.468	173.871	117.664	35.008	110.663	198.765
15.0	47.260	125.249	183.595	132.251	38.508	130.306	216.658
17.5	51.539	140.419	176.594	149.366	43.371	151.116	218.214
20.0	60.096	156.562	173.677	166.675	49.983	166.481	201.294
22.5	74.683	171.732	174.844	174.066	59.513	181.651	189.430
25.0	97.243	187.096	174.260	184.568	77.017	196.821	189.819
27.5	125.638	204.017	183.401	194.487	100.355	207.323	191.180
30.0	163.952	232.801	211.213	218.214	133.223	221.715	197.210
32.5	219.770	269.753	251.082	255.167	185.929	258.278	231.828
35.0	268.586	295.425	284.340	294.064	253.027	297.759	271.892
37.5	295.036	303.205	291.730	313.707	303.594	326.543	300.871
40.0	303.205	297.370	283.367	312.151	322.848	334.517	311.179
42.5	307.095	292.508	274.032	303.010	322.459	324.015	300.093
45.0	314.096	293.480	271.698	297.370	321.875	317.597	292.314
47.5	327.127	300.676	274.032	299.704	326.738	319.931	298.148
50.0	349.298	319.542	289.202	312.540	344.436	334.517	315.263
52.5	379.444	346.575	314.485	336.462	371.859	360.384	340.352
55.0	418.924	384.306	351.632	370.886	410.756	392.280	367.385
57.5	461.517	422.036	396.947	411.728	458.405	432.538	402.587
60.0	492.829	453.932	439.734	447.708	498.080	463.267	438.956
62.5	510.917	475.325	472.214	475.909	523.947	491.662	472.797
65.0	507.610	478.826	482.522	488.940	521.613	509.944	495.552
67.5	488.551	458.600	462.295	475.131	489.912	494.385	483.299
70.0	448.097	415.229	414.451	436.428	448.875	454.515	439.734
72.5	395.391	359.995	354.160	379.055	394.030	397.336	377.693
75.0	322.264	298.537	292.897	315.068	322.459	327.516	307.289
77.5	251.082	240.580	235.329	252.444	242.914	259.640	243.303
80.0	192.347	187.291	182.623	197.793	183.595	201.683	189.625

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CANDELA TABULATION - (Cont.)

82.5	144.893	141.975	137.113	153.256	140.808	154.033	145.282
85.0	107.940	104.828	101.522	115.720	108.524	114.942	107.357
87.5	78.767	76.044	73.710	84.991	81.684	83.824	79.351
90.0	55.234	52.900	50.178	58.346	57.957	57.568	53.095
92.5	44.537	42.204	36.952	41.426	42.787	40.259	35.008
95.0	46.093	43.565	37.730	42.204	43.565	40.842	35.008
97.5	50.178	47.649	41.037	45.899	47.844	44.537	38.314
100.0	53.095	51.733	45.315	50.372	51.733	48.816	42.593
102.5	54.456	52.900	47.455	52.706	53.484	51.539	46.288
105.0	55.818	53.678	48.427	53.289	54.456	52.511	46.871
107.5	56.790	53.873	49.594	53.873	55.234	53.289	48.233
110.0	57.374	53.678	50.372	53.873	55.623	53.289	49.400
112.5	55.623	51.344	47.844	52.317	55.429	52.317	49.011
115.0	53.484	50.956	45.899	51.150	53.678	50.567	45.704
117.5	51.150	49.789	46.677	50.761	51.344	50.178	45.315
120.0	49.400	47.455	44.148	48.038	49.400	47.844	43.760
122.5	48.038	45.510	42.398	45.510	48.038	45.704	41.037
125.0	46.677	43.954	39.092	43.760	46.482	43.954	38.897
127.5	45.121	42.398	37.536	42.204	45.121	42.593	37.536
130.0	43.371	40.842	36.175	40.453	43.371	40.842	36.175
132.5	41.426	39.092	34.424	38.897	41.620	39.092	34.813
135.0	39.481	37.147	33.063	36.952	39.675	37.147	32.868
137.5	37.341	35.008	31.507	35.008	37.536	35.202	31.312
140.0	35.008	32.674	29.173	32.868	35.202	32.868	29.756
142.5	32.674	30.340	27.034	30.534	32.868	30.729	27.617
145.0	30.340	28.006	25.089	28.201	30.145	28.201	25.283
147.5	27.617	25.478	22.755	25.867	27.617	25.672	23.144
150.0	24.894	22.949	20.616	23.338	24.894	23.144	20.421
152.5	21.977	20.616	18.671	20.810	22.366	20.616	18.282
155.0	19.254	17.893	16.337	18.282	19.449	18.087	16.142
157.5	16.337	15.364	14.198	15.559	16.726	15.559	14.003
160.0	13.614	13.031	11.864	13.031	13.809	12.836	11.864
162.5	10.891	10.502	9.530	10.502	11.086	10.502	9.724
165.0	8.363	7.974	7.196	8.168	8.363	8.168	7.585
167.5	5.835	5.835	5.446	5.835	6.029	5.835	5.057
170.0	3.890	3.695	3.695	3.695	3.890	3.890	3.306
172.5	1.945	2.139	1.945	2.139	2.139	2.139	1.750
175.0	0.583	0.778	0.583	0.778	0.583	0.583	0.389
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

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Zone	Lumens	%Lamp	%Fixt
0-20	39.59	N.A.	1.90
0-30	116.56	N.A.	5.70
0-40	287.94	N.A.	14.10
0-60	870.79	N.A.	42.60
0-80	1670.35	N.A.	81.70
0-90	1793.15	N.A.	87.70
10-90	1789.22	N.A.	87.50
20-40	248.36	N.A.	12.10
20-50	483.82	N.A.	23.70
40-70	1055.2	N.A.	51.60
60-80	799.57	N.A.	39.10
70-80	327.21	N.A.	16.00
80-90	122.79	N.A.	6.00
90-110	104.54	N.A.	5.10
90-120	155.11	N.A.	7.60
90-130	195.35	N.A.	9.60
90-150	241.28	N.A.	11.80
90-180	252.29	N.A.	12.30
110-180	147.74	N.A.	7.20
0-180	2045.43	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	3.92
10-20	35.66
20-30	76.97
30-40	171.39
40-50	235.46
50-60	347.38
60-70	472.35
70-80	327.21
80-90	122.79
90-100	49.11
100-110	55.44
110-120	50.56
120-130	40.25
130-140	28.38
140-150	17.55
150-160	8.42
160-170	2.42
170-180	0.16

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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	226	226	226	226	218	218	218	218	203	203	203	189	189	189	176	176	176	170
1	196	183	171	160	188	176	165	156	163	154	146	151	144	137	140	134	129	123
2	172	150	132	117	164	144	128	114	133	119	107	122	111	101	113	103	95	89
3	152	125	105	88	144	120	101	86	110	94	81	101	88	76	93	82	72	66
4	135	106	85	68	128	102	82	67	93	76	63	86	71	59	78	66	56	50
5	122	92	70	55	116	88	68	53	81	63	50	74	59	47	67	55	44	39
6	111	80	59	44	105	77	57	43	71	54	41	65	50	38	59	46	36	31
7	102	71	51	37	96	68	49	36	63	46	34	57	43	32	53	40	30	25
8	94	63	44	31	89	61	43	30	56	40	29	52	37	27	47	35	25	21
9	87	57	39	27	82	55	38	26	51	35	25	47	33	23	43	31	22	17
10	81	52	35	23	77	50	34	23	46	31	21	43	29	20	39	27	19	15

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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

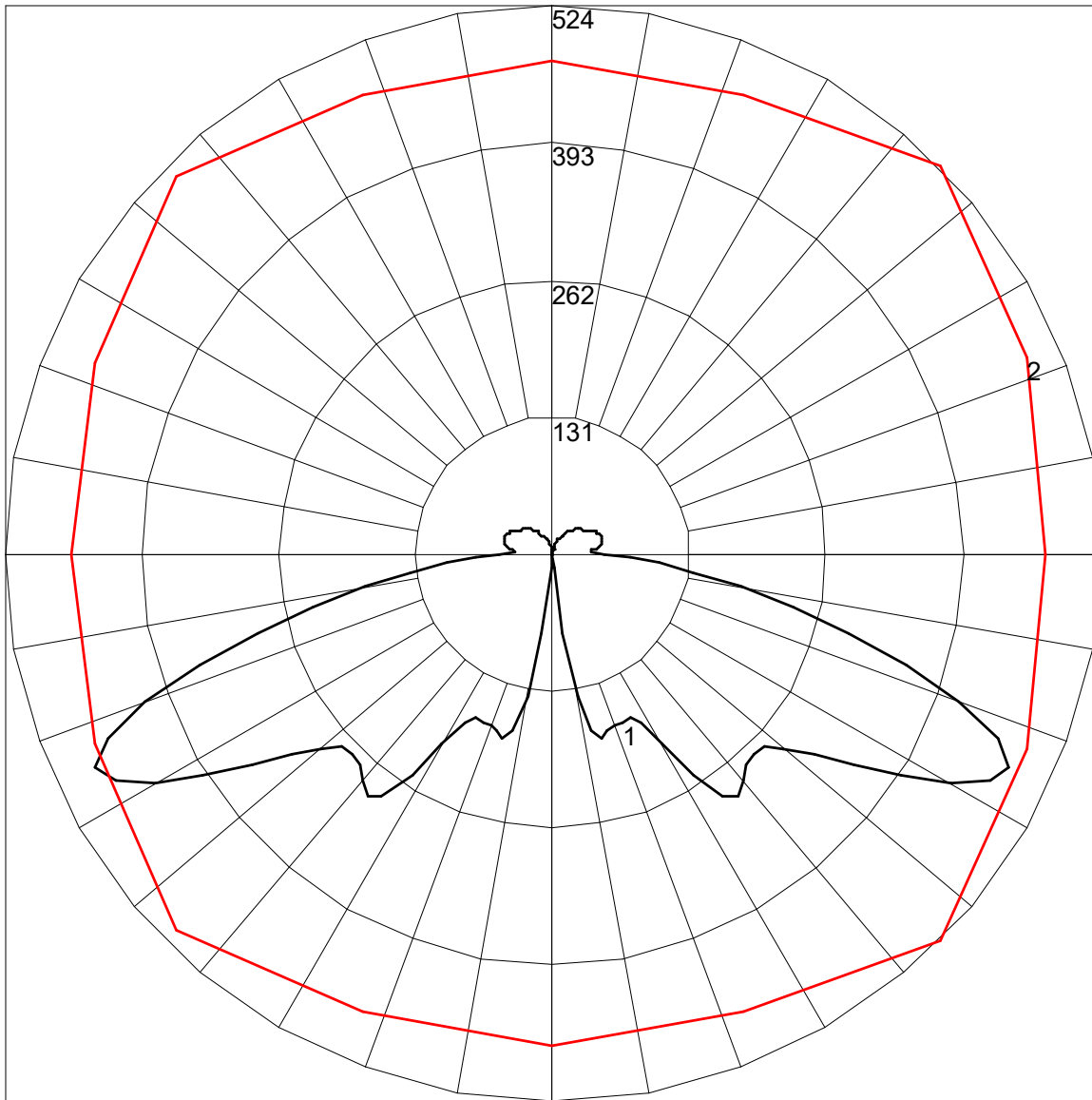
X=2H	Y=2H	22.3	24.0	22.8	24.5	25.1	22.1	23.7	22.6	24.3	24.9
	3H	26.3	27.9	26.8	28.4	29.0	26.0	27.5	26.5	28.1	28.7
	4H	27.5	28.9	28.0	29.5	30.1	27.1	28.6	27.6	29.1	29.8
	6H	28.2	29.6	28.8	30.2	30.8	27.9	29.3	28.4	29.8	30.5
	8H	28.5	29.8	29.1	30.4	31.1	28.1	29.5	28.7	30.1	30.7
	12H	28.7	30.0	29.3	30.6	31.3	28.4	29.7	29.0	30.3	31.0

UGR Viewed Endwise

4H	2H	23.9	25.4	24.5	26.0	26.6	23.7	25.2	24.3	25.8	26.4
	3H	27.7	29.0	28.2	29.5	30.2	27.4	28.7	27.9	29.3	29.9
	4H	28.9	30.1	29.5	30.7	31.4	28.5	29.7	29.1	30.3	31.0
	6H	29.7	30.8	30.3	31.4	32.1	29.4	30.5	30.0	31.1	31.8
	8H	30.1	31.1	30.7	31.7	32.4	29.7	30.8	30.4	31.4	32.1
	12H	30.4	31.3	31.0	32.0	32.7	30.1	31.0	30.7	31.6	32.3
8H	4H	29.3	30.3	30.0	31.0	31.7	29.1	30.1	29.7	30.7	31.4
	6H	30.4	31.2	31.0	31.9	32.6	30.1	30.9	30.7	31.6	32.3
	8H	30.8	31.6	31.5	32.2	33.0	30.5	31.3	31.2	32.0	32.7
	12H	31.3	31.9	31.9	32.6	33.4	31.0	31.6	31.6	32.3	33.1
12H	4H	29.4	30.3	30.0	31.0	31.7	29.1	30.1	29.8	30.7	31.4
	6H	30.5	31.2	31.2	31.9	32.7	30.2	31.0	30.9	31.6	32.4
	8H	31.0	31.7	31.7	32.3	33.1	30.7	31.4	31.4	32.1	32.9

Maximum UGR = 33.4

POLAR GRAPH



Maximum Candela = 523.947 Located At Horizontal Angle = 45, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)