



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-13_53_17-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05 & #12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS INC. - CARTHAGE, MO.

[LUMCAT] 8CRDI-TL-P29-835U-P29-83DD-xxx-POE PR-ON-CSU-LW-WHD-WM

[LUMINAIRE] White formed aluminum housing, specular reflector, clear glass cover

[MORE]

[LAMP] Two white LEDs, one up/ one down

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4945
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	50
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
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	34218	34218	34218
55	28488	28488	28488
65	21643	21643	21643
75	15695	15695	15695
85	10228	10228	10228

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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	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537
2.5	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582
5.0	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871
7.5	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345
10.0	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390
12.5	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206
15.0	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265
17.5	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999
20.0	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620
22.5	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491
25.0	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828
27.5	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816
30.0	989.770	989.770	989.770	989.770	989.770	989.770	989.770	989.770	989.770	989.770
32.5	804.856	804.856	804.856	804.856	804.856	804.856	804.856	804.856	804.856	804.856
35.0	660.475	660.475	660.475	660.475	660.475	660.475	660.475	660.475	660.475	660.475
37.5	572.810	572.810	572.810	572.810	572.810	572.810	572.810	572.810	572.810	572.810
40.0	517.979	517.979	517.979	517.979	517.979	517.979	517.979	517.979	517.979	517.979
42.5	477.446	477.446	477.446	477.446	477.446	477.446	477.446	477.446	477.446	477.446
45.0	441.783	441.783	441.783	441.783	441.783	441.783	441.783	441.783	441.783	441.783
47.5	407.220	407.220	407.220	407.220	407.220	407.220	407.220	407.220	407.220	407.220
50.0	371.556	371.556	371.556	371.556	371.556	371.556	371.556	371.556	371.556	371.556
52.5	334.951	334.951	334.951	334.951	334.951	334.951	334.951	334.951	334.951	334.951
55.0	298.345	298.345	298.345	298.345	298.345	298.345	298.345	298.345	298.345	298.345
57.5	262.525	262.525	262.525	262.525	262.525	262.525	262.525	262.525	262.525	262.525
60.0	227.804	227.804	227.804	227.804	227.804	227.804	227.804	227.804	227.804	227.804
62.5	196.069	196.069	196.069	196.069	196.069	196.069	196.069	196.069	196.069	196.069
65.0	167.004	167.004	167.004	167.004	167.004	167.004	167.004	167.004	167.004	167.004
67.5	140.092	140.092	140.092	140.092	140.092	140.092	140.092	140.092	140.092	140.092
70.0	115.127	115.127	115.127	115.127	115.127	115.127	115.127	115.127	115.127	115.127
72.5	93.195	93.195	93.195	93.195	93.195	93.195	93.195	93.195	93.195	93.195
75.0	74.170	74.170	74.170	74.170	74.170	74.170	74.170	74.170	74.170	74.170
77.5	57.344	57.344	57.344	57.344	57.344	57.344	57.344	57.344	57.344	57.344
80.0	42.387	42.387	42.387	42.387	42.387	42.387	42.387	42.387	42.387	42.387
82.5	28.798	28.798	28.798	28.798	28.798	28.798	28.798	28.798	28.798	28.798
85.0	16.276	16.276	16.276	16.276	16.276	16.276	16.276	16.276	16.276	16.276
87.5	5.672	5.672	5.672	5.672	5.672	5.672	5.672	5.672	5.672	5.672
90.0	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880	0.880
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	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061	12.061

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135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

**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	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537	1560.537
2.5	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582	1551.582
5.0	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871	1535.871
7.5	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345	1525.345
10.0	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390	1516.390
12.5	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206	1511.206
15.0	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265	1499.265
17.5	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999	1478.999
20.0	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620	1449.620
22.5	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491	1391.491
25.0	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828	1292.828
27.5	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816	1158.816
30.0	989.770	989.770	989.770	989.770	989.770	989.770	989.770
32.5	804.856	804.856	804.856	804.856	804.856	804.856	804.856
35.0	660.475	660.475	660.475	660.475	660.475	660.475	660.475
37.5	572.810	572.810	572.810	572.810	572.810	572.810	572.810
40.0	517.979	517.979	517.979	517.979	517.979	517.979	517.979
42.5	477.446	477.446	477.446	477.446	477.446	477.446	477.446
45.0	441.783	441.783	441.783	441.783	441.783	441.783	441.783
47.5	407.220	407.220	407.220	407.220	407.220	407.220	407.220
50.0	371.556	371.556	371.556	371.556	371.556	371.556	371.556
52.5	334.951	334.951	334.951	334.951	334.951	334.951	334.951
55.0	298.345	298.345	298.345	298.345	298.345	298.345	298.345
57.5	262.525	262.525	262.525	262.525	262.525	262.525	262.525
60.0	227.804	227.804	227.804	227.804	227.804	227.804	227.804
62.5	196.069	196.069	196.069	196.069	196.069	196.069	196.069
65.0	167.004	167.004	167.004	167.004	167.004	167.004	167.004
67.5	140.092	140.092	140.092	140.092	140.092	140.092	140.092
70.0	115.127	115.127	115.127	115.127	115.127	115.127	115.127
72.5	93.195	93.195	93.195	93.195	93.195	93.195	93.195
75.0	74.170	74.170	74.170	74.170	74.170	74.170	74.170
77.5	57.344	57.344	57.344	57.344	57.344	57.344	57.344
80.0	42.387	42.387	42.387	42.387	42.387	42.387	42.387

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82.5	28.798	28.798	28.798	28.798	28.798	28.798	28.798
85.0	16.276	16.276	16.276	16.276	16.276	16.276	16.276
87.5	5.672	5.672	5.672	5.672	5.672	5.672	5.672
90.0	0.880	0.880	0.880	0.880	0.880	0.880	0.880
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	1.206	1.206	1.206	1.206	1.206	1.206	1.206
110.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
112.5	1.206	1.206	1.206	1.206	1.206	1.206	1.206
115.0	1.206	1.206	1.206	1.206	1.206	1.206	1.206
117.5	2.412	2.412	2.412	2.412	2.412	2.412	2.412
120.0	2.412	2.412	2.412	2.412	2.412	2.412	2.412
122.5	3.618	3.618	3.618	3.618	3.618	3.618	3.618
125.0	4.824	4.824	4.824	4.824	4.824	4.824	4.824
127.5	6.030	6.030	6.030	6.030	6.030	6.030	6.030
130.0	9.649	9.649	9.649	9.649	9.649	9.649	9.649
132.5	12.061	12.061	12.061	12.061	12.061	12.061	12.061
135.0	15.679	15.679	15.679	15.679	15.679	15.679	15.679
137.5	20.503	20.503	20.503	20.503	20.503	20.503	20.503
140.0	25.328	25.328	25.328	25.328	25.328	25.328	25.328
142.5	45.831	45.831	45.831	45.831	45.831	45.831	45.831
145.0	291.873	291.873	291.873	291.873	291.873	291.873	291.873
147.5	653.698	653.698	653.698	653.698	653.698	653.698	653.698
150.0	910.595	910.595	910.595	910.595	910.595	910.595	910.595
152.5	992.608	992.608	992.608	992.608	992.608	992.608	992.608
155.0	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413	1231.413
157.5	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827	1590.827
160.0	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081	1879.081
162.5	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062	2113.062
165.0	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766	2450.766
167.5	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984	3048.984
170.0	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657	4252.657
172.5	6670.867	6670.867	6670.869	6670.869	6670.869	6670.869	6670.869
175.0	11855.841	11855.841	11855.844	11855.844	11855.844	11855.844	11855.844
177.5	20901.478	20901.479	20901.479	20901.479	20901.480	20901.480	20901.480
180.0	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881	26533.881

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	568.39	N.A.	11.50
0-30	1147.99	N.A.	23.20
0-40	1580.72	N.A.	32.00
0-60	2189.03	N.A.	44.30
0-80	2435.71	N.A.	49.30
0-90	2455.4	N.A.	49.70
10-90	2309.31	N.A.	46.70
20-40	1012.34	N.A.	20.50
20-50	1353.74	N.A.	27.40
40-70	775.01	N.A.	15.70
60-80	246.68	N.A.	5.00
70-80	79.98	N.A.	1.60
80-90	19.68	N.A.	0.40
90-110	0.59	N.A.	0.00
90-120	2.23	N.A.	0.00
90-130	6.77	N.A.	0.10
90-150	236.04	N.A.	4.80
90-180	2489.59	N.A.	50.30
110-180	2489.00	N.A.	50.30
0-180	4944.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	146.09
10-20	422.30
20-30	579.60
30-40	432.73
40-50	341.41
50-60	266.90
60-70	166.70
70-80	79.98
80-90	19.68
90-100	0.12
100-110	0.47
110-120	1.64
120-130	4.54
130-140	12.56
140-150	216.71
150-160	588.48
160-170	725.36
170-180	939.72

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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	99	95	91	88	91	88	85	82	74	72	70	62	61	59	51	50	49	44
2	91	84	78	74	84	78	73	69	66	63	60	56	53	51	46	44	43	38
3	84	75	68	63	77	70	64	59	60	55	52	50	47	45	42	40	38	34
4	77	67	60	54	71	63	56	51	54	49	45	46	42	39	38	36	34	30
5	71	61	53	48	66	57	50	45	49	44	40	42	38	35	35	33	30	27
6	66	55	47	42	61	51	45	40	45	39	36	38	34	32	32	30	27	25
7	62	50	43	37	57	47	40	36	41	36	32	35	31	28	30	27	25	22
8	57	46	39	34	53	43	37	32	38	33	29	33	29	26	28	25	23	21
9	54	42	35	30	50	40	33	29	35	30	26	30	26	24	26	23	21	19
10	50	39	32	28	47	37	31	26	32	28	24	28	25	22	25	22	19	18

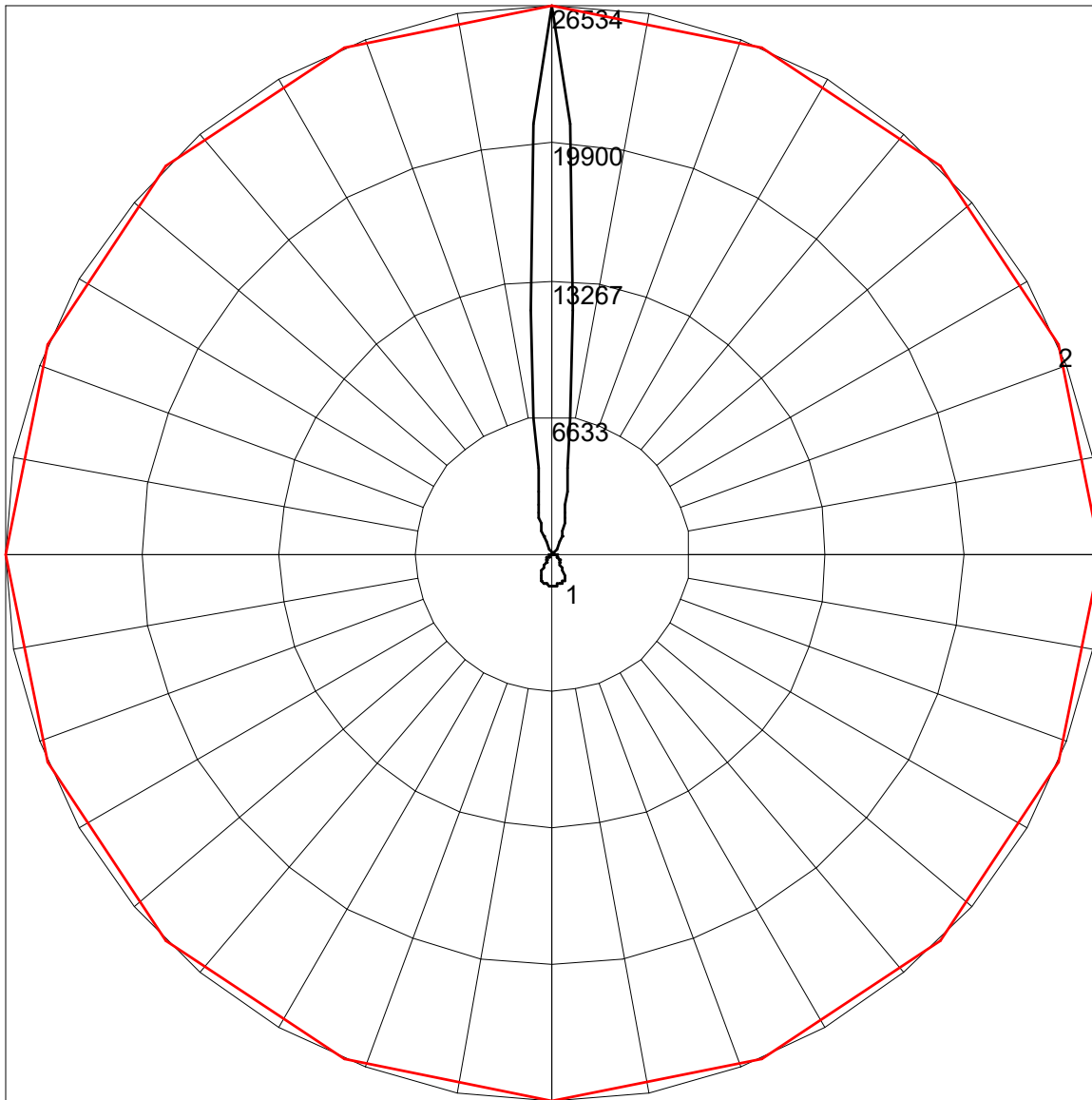
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-13_53_17-MERGED.IES

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					UGR Viewed Endwise				
X=2H	Y=2H	17.5	18.3	18.5	19.3	20.6	17.5	18.3	18.5	19.3	20.6
	3H	18.7	19.4	19.7	20.4	21.7	18.7	19.4	19.7	20.4	21.7
	4H	19.1	19.7	20.1	20.7	22.0	19.1	19.7	20.1	20.7	22.0
	6H	19.3	19.9	20.3	20.9	22.2	19.3	19.9	20.3	20.9	22.2
	8H	19.4	19.9	20.4	20.9	22.3	19.4	19.9	20.4	20.9	22.3
	12H	19.4	19.9	20.4	20.9	22.3	19.4	19.9	20.4	20.9	22.3
4H	2H	17.9	18.5	18.9	19.5	20.8	17.9	18.5	18.9	19.5	20.8
	3H	19.2	19.8	20.2	20.8	22.1	19.2	19.8	20.2	20.8	22.1
	4H	19.7	20.2	20.7	21.2	22.6	19.7	20.2	20.7	21.2	22.6
	6H	20.0	20.5	21.1	21.5	22.9	20.0	20.5	21.1	21.5	22.9
	8H	20.1	20.5	21.2	21.6	22.9	20.1	20.5	21.2	21.6	22.9
	12H	20.2	20.5	21.2	21.6	23.0	20.2	20.5	21.2	21.6	23.0
8H	4H	19.8	20.2	20.9	21.3	22.6	19.8	20.2	20.9	21.3	22.6
	6H	20.3	20.6	21.3	21.7	23.0	20.3	20.6	21.3	21.7	23.0
	8H	20.4	20.7	21.5	21.8	23.2	20.4	20.7	21.5	21.8	23.2
	12H	20.5	20.8	21.6	21.8	23.2	20.5	20.8	21.6	21.8	23.2
12H	4H	19.8	20.2	20.9	21.2	22.6	19.8	20.2	20.9	21.2	22.6
	6H	20.3	20.6	21.3	21.6	23.0	20.3	20.6	21.3	21.6	23.0
	8H	20.5	20.7	21.5	21.8	23.2	20.5	20.7	21.5	21.8	23.2

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 26533.881 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)