



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-11_16_20-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04 & #12326812.15

[TESTLAB]

[ISSUEDATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-PoE PR-OM-CSU-RN-WHD-WM

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

[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	5212
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
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	7792	7792	7792
55	5097	5097	5097
65	3468	3468	3468
75	2241	2241	2241
85	1798	1798	1798

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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	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300
2.5	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613
5.0	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192
7.5	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033
10.0	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447
12.5	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413
15.0	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362
17.5	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549
20.0	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318
22.5	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599
25.0	935.598	935.598	935.598	935.598	935.598	935.598	935.598	935.598	935.598	935.598
27.5	647.820	647.820	647.820	647.820	647.820	647.820	647.820	647.820	647.820	647.820
30.0	456.923	456.923	456.923	456.923	456.923	456.923	456.923	456.923	456.923	456.923
32.5	330.994	330.994	330.994	330.994	330.994	330.994	330.994	330.994	330.994	330.994
35.0	246.421	246.421	246.421	246.421	246.421	246.421	246.421	246.421	246.421	246.421
37.5	188.608	188.608	188.608	188.608	188.608	188.608	188.608	188.608	188.608	188.608
40.0	148.969	148.969	148.969	148.969	148.969	148.969	148.969	148.969	148.969	148.969
42.5	121.064	121.064	121.064	121.064	121.064	121.064	121.064	121.064	121.064	121.064
45.0	100.600	100.600	100.600	100.600	100.600	100.600	100.600	100.600	100.600	100.600
47.5	84.716	84.716	84.716	84.716	84.716	84.716	84.716	84.716	84.716	84.716
50.0	72.123	72.123	72.123	72.123	72.123	72.123	72.123	72.123	72.123	72.123
52.5	61.820	61.820	61.820	61.820	61.820	61.820	61.820	61.820	61.820	61.820
55.0	53.377	53.377	53.377	53.377	53.377	53.377	53.377	53.377	53.377	53.377
57.5	45.936	45.936	45.936	45.936	45.936	45.936	45.936	45.936	45.936	45.936
60.0	39.210	39.210	39.210	39.210	39.210	39.210	39.210	39.210	39.210	39.210
62.5	32.770	32.770	32.770	32.770	32.770	32.770	32.770	32.770	32.770	32.770
65.0	26.760	26.760	26.760	26.760	26.760	26.760	26.760	26.760	26.760	26.760
67.5	21.608	21.608	21.608	21.608	21.608	21.608	21.608	21.608	21.608	21.608
70.0	17.172	17.172	17.172	17.172	17.172	17.172	17.172	17.172	17.172	17.172
72.5	13.452	13.452	13.452	13.452	13.452	13.452	13.452	13.452	13.452	13.452
75.0	10.590	10.590	10.590	10.590	10.590	10.590	10.590	10.590	10.590	10.590
77.5	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300	8.300
80.0	6.440	6.440	6.440	6.440	6.440	6.440	6.440	6.440	6.440	6.440
82.5	4.579	4.579	4.579	4.579	4.579	4.579	4.579	4.579	4.579	4.579
85.0	2.862	2.862	2.862	2.862	2.862	2.862	2.862	2.862	2.862	2.862
87.5	1.431	1.431	1.431	1.431	1.431	1.431	1.431	1.431	1.431	1.431
90.0	0.560	0.560	0.560	0.560	0.560	0.560	0.560	0.560	0.560	0.560
92.5	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261
95.0	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392
97.5	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522
100.0	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785
102.5	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046
105.0	1.438	1.438	1.438	1.438	1.438	1.438	1.438	1.438	1.438	1.438
107.5	2.093	2.093	2.093	2.093	2.093	2.093	2.093	2.093	2.093	2.093
110.0	2.876	2.876	2.876	2.876	2.876	2.876	2.876	2.876	2.876	2.876
112.5	3.792	3.792	3.792	3.792	3.792	3.792	3.792	3.792	3.792	3.792
115.0	5.230	5.230	5.230	5.230	5.230	5.230	5.230	5.230	5.230	5.230
117.5	7.060	7.060	7.060	7.060	7.060	7.060	7.060	7.060	7.060	7.060
120.0	9.544	9.544	9.544	9.544	9.544	9.544	9.544	9.544	9.544	9.544
122.5	13.075	13.075	13.075	13.075	13.075	13.075	13.075	13.075	13.075	13.075
125.0	18.043	18.043	18.043	18.043	18.043	18.043	18.043	18.043	18.043	18.043
127.5	25.364	25.364	25.364	25.364	25.364	25.364	25.364	25.364	25.364	25.364
130.0	35.040	35.040	35.040	35.040	35.040	35.040	35.040	35.040	35.040	35.040
132.5	46.807	46.807	46.807	46.807	46.807	46.807	46.807	46.807	46.807	46.807

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CANDELA TABULATION - (Cont.)

135.0	60.404	60.404	60.404	60.404	60.404	60.404	60.404	60.404	60.404	60.404
137.5	85.377	85.377	85.377	85.377	85.377	85.377	85.377	85.377	85.377	85.377
140.0	151.404	151.404	151.404	151.404	151.404	151.404	151.404	151.404	151.404	151.404
142.5	225.537	225.537	225.537	225.537	225.537	225.537	225.537	225.537	225.537	225.537
145.0	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100	517.100
147.5	929.864	929.864	929.864	929.864	929.864	929.864	929.864	929.864	929.864	929.864
150.0	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380
152.5	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878
155.0	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131
157.5	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300
160.0	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860
162.5	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507
165.0	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840
167.5	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621
170.0	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222
172.5	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242
175.0	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225
177.5	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895
180.0	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619

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	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300	9629.300
2.5	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613	9394.613
5.0	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192	8729.192
7.5	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033	7716.033
10.0	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447	6452.447
12.5	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413	5094.413
15.0	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362	3809.362
17.5	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549	2747.549
20.0	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318	1943.318
22.5	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599	1354.599
25.0	935.598	935.598	935.598	935.598	935.598	935.598	935.598
27.5	647.820	647.820	647.820	647.820	647.820	647.820	647.820
30.0	456.923	456.923	456.923	456.923	456.923	456.923	456.923
32.5	330.994	330.994	330.994	330.994	330.994	330.994	330.994
35.0	246.421	246.421	246.421	246.421	246.421	246.421	246.421
37.5	188.608	188.608	188.608	188.608	188.608	188.608	188.608
40.0	148.969	148.969	148.969	148.969	148.969	148.969	148.969
42.5	121.064	121.064	121.064	121.064	121.064	121.064	121.064
45.0	100.600	100.600	100.600	100.600	100.600	100.600	100.600
47.5	84.716	84.716	84.716	84.716	84.716	84.716	84.716
50.0	72.123	72.123	72.123	72.123	72.123	72.123	72.123
52.5	61.820	61.820	61.820	61.820	61.820	61.820	61.820
55.0	53.377	53.377	53.377	53.377	53.377	53.377	53.377
57.5	45.936	45.936	45.936	45.936	45.936	45.936	45.936
60.0	39.210	39.210	39.210	39.210	39.210	39.210	39.210
62.5	32.770	32.770	32.770	32.770	32.770	32.770	32.770
65.0	26.760	26.760	26.760	26.760	26.760	26.760	26.760
67.5	21.608	21.608	21.608	21.608	21.608	21.608	21.608
70.0	17.172	17.172	17.172	17.172	17.172	17.172	17.172
72.5	13.452	13.452	13.452	13.452	13.452	13.452	13.452
75.0	10.590	10.590	10.590	10.590	10.590	10.590	10.590
77.5	8.300	8.300	8.300	8.300	8.300	8.300	8.300
80.0	6.440	6.440	6.440	6.440	6.440	6.440	6.440

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82.5	4.579	4.579	4.579	4.579	4.579	4.579	4.579
85.0	2.862	2.862	2.862	2.862	2.862	2.862	2.862
87.5	1.431	1.431	1.431	1.431	1.431	1.431	1.431
90.0	0.560	0.560	0.560	0.560	0.560	0.560	0.560
92.5	0.261	0.261	0.261	0.261	0.261	0.261	0.261
95.0	0.392	0.392	0.392	0.392	0.392	0.392	0.392
97.5	0.522	0.522	0.522	0.522	0.522	0.522	0.522
100.0	0.785	0.785	0.785	0.785	0.785	0.785	0.785
102.5	1.046	1.046	1.046	1.046	1.046	1.046	1.046
105.0	1.438	1.438	1.438	1.438	1.438	1.438	1.438
107.5	2.093	2.093	2.093	2.093	2.093	2.093	2.093
110.0	2.876	2.876	2.876	2.876	2.876	2.876	2.876
112.5	3.792	3.792	3.792	3.792	3.792	3.792	3.792
115.0	5.230	5.230	5.230	5.230	5.230	5.230	5.230
117.5	7.060	7.060	7.060	7.060	7.060	7.060	7.060
120.0	9.544	9.544	9.544	9.544	9.544	9.544	9.544
122.5	13.075	13.075	13.075	13.075	13.075	13.075	13.075
125.0	18.043	18.043	18.043	18.043	18.043	18.043	18.043
127.5	25.364	25.364	25.364	25.364	25.364	25.364	25.364
130.0	35.040	35.040	35.040	35.040	35.040	35.040	35.040
132.5	46.807	46.807	46.807	46.807	46.807	46.807	46.807
135.0	60.404	60.404	60.404	60.404	60.404	60.404	60.404
137.5	85.377	85.377	85.377	85.377	85.377	85.377	85.377
140.0	151.404	151.404	151.404	151.404	151.404	151.404	151.404
142.5	225.537	225.537	225.537	225.537	225.537	225.537	225.537
145.0	517.100	517.100	517.100	517.100	517.100	517.100	517.100
147.5	929.864	929.864	929.864	929.864	929.864	929.864	929.864
150.0	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380	1311.380
152.5	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878	1538.878
155.0	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131	1846.131
157.5	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300	2191.300
160.0	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860	2499.860
162.5	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507	2753.507
165.0	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840	3039.840
167.5	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621	3404.621
170.0	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222	3913.222
172.5	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242	4670.242
175.0	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225	5193.225
177.5	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895	5310.895
180.0	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619	5245.619

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1817.19	N.A.	34.90
0-30	2276.28	N.A.	43.70
0-40	2440.49	N.A.	46.80
0-60	2568.77	N.A.	49.30
0-80	2607.39	N.A.	50.00
0-90	2610.76	N.A.	50.10
10-90	1850.58	N.A.	35.50
20-40	623.30	N.A.	12.00
20-50	703.23	N.A.	13.50
40-70	155.26	N.A.	3.00
60-80	38.63	N.A.	0.70
70-80	11.64	N.A.	0.20
80-90	3.37	N.A.	0.10
90-110	2.19	N.A.	0.00
90-120	7.68	N.A.	0.10
90-130	25.13	N.A.	0.50
90-150	441.48	N.A.	8.50
90-180	2601.72	N.A.	49.90
110-180	2599.53	N.A.	49.90
0-180	5212.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	760.18
10-20	1057.01
20-30	459.09
30-40	164.22
40-50	79.93
50-60	48.35
60-70	26.99
70-80	11.64
80-90	3.37
90-100	0.50
100-110	1.69
110-120	5.49
120-130	17.45
130-140	54.27
140-150	362.08
150-160	849.05
160-170	859.30
170-180	451.89

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	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	101	97	94	92	93	90	88	86	77	76	74	65	64	63	54	53	53	48
2	94	89	84	81	87	83	79	76	72	69	67	61	60	58	52	51	50	45
3	89	82	76	72	82	77	72	68	67	64	61	58	56	54	50	48	47	43
4	84	76	70	65	78	71	66	62	63	59	56	55	52	50	48	46	45	42
5	79	70	64	60	74	66	61	57	59	55	52	52	50	47	46	44	43	40
6	75	66	60	55	70	62	57	53	56	52	49	50	47	45	44	42	41	38
7	71	62	56	52	67	59	54	50	53	49	46	48	45	43	42	41	39	37
8	68	58	52	48	64	56	50	47	50	47	44	46	43	41	41	39	38	36
9	65	55	49	46	61	53	48	44	48	44	42	44	41	39	40	38	36	34
10	62	52	47	43	58	50	45	42	46	42	40	42	39	37	38	36	35	33

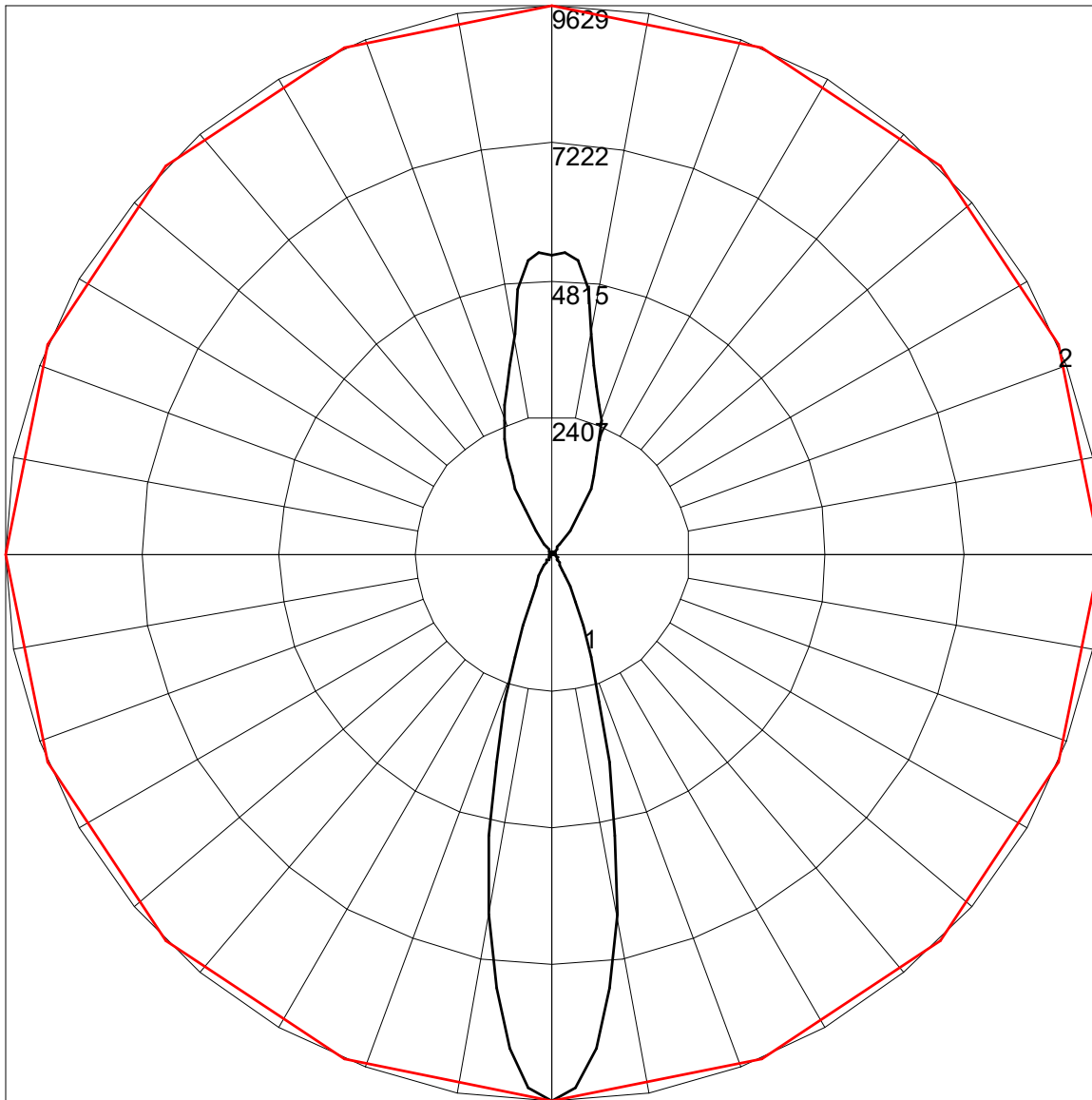
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 192_168_37_234-11_16_20-MERGED.IES

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	5.8	6.0	6.4	7.0	8.3	5.8	6.0	6.4	7.0	8.3
	3H	6.2	6.8	7.2	7.8	9.1	6.2	6.8	7.2	7.8	9.1
	4H	6.5	7.0	7.5	8.0	9.3	6.5	7.0	7.5	8.0	9.3
	6H	6.6	7.1	7.7	8.1	9.5	6.6	7.1	7.7	8.1	9.5
	8H	6.7	7.2	7.7	8.2	9.5	6.7	7.2	7.7	8.2	9.5
	12H	6.7	7.1	7.7	8.2	9.5	6.7	7.1	7.7	8.2	9.5
4H	2H	5.8	6.1	6.6	7.1	8.5	5.8	6.1	6.6	7.1	8.5
	3H	6.6	7.1	7.7	8.1	9.4	6.6	7.1	7.7	8.1	9.4
	4H	6.9	7.4	8.0	8.4	9.7	6.9	7.4	8.0	8.4	9.7
	6H	7.2	7.6	8.3	8.6	10.0	7.2	7.6	8.3	8.6	10.0
	8H	7.3	7.6	8.4	8.7	10.0	7.3	7.6	8.4	8.7	10.0
	12H	7.3	7.6	8.4	8.7	10.0	7.3	7.6	8.4	8.7	10.0
8H	4H	7.0	7.3	8.1	8.4	9.7	7.0	7.3	8.1	8.4	9.7
	6H	7.4	7.6	8.4	8.7	10.1	7.4	7.6	8.4	8.7	10.1
	8H	7.5	7.7	8.6	8.8	10.2	7.5	7.7	8.6	8.8	10.2
	12H	7.6	7.8	8.7	8.9	10.3	7.6	7.8	8.7	8.9	10.3
12H	4H	7.0	7.3	8.0	8.3	9.7	7.0	7.3	8.0	8.3	9.7
	6H	7.4	7.6	8.4	8.6	10.0	7.4	7.6	8.4	8.6	10.0
	8H	7.5	7.7	8.6	8.8	10.2	7.5	7.7	8.6	8.8	10.2

Maximum UGR = 10.3

POLAR GRAPH



Maximum Candela = 9629.3 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)