



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-WHU-RW-WHD-WM\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.19 and #13257153.16

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-L12-835U-L12-835D-xxx-DIM1-UNV-LM-WHU-RW-WHD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib white painted flush prismatic lens trim up,

[MORE] wide distrib white painted regressed prismatic lens trim down

[LAMP] Two white LEDs (one up/one down)

[BALLAST] (2) ERP PHB30W-0700-42 Drivers

[OTHER]

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[ CONVERT] Photometric web converted from original test data

[ CONVERT] Luminaire test position and photometric web converted from original test data

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2786
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	28.2
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	Rectangular
Luminous Length (0-180)	0.21 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.00 ft

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-WHU-RW-WHD-WM\_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	28992	39460	28368
55	20144	21752	19724
65	15615	14429	15663
75	8990	8293	9068
85	4144	4144	4144

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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>
0.0	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827
2.5	1499.406	1505.862	1498.599	1492.950	1491.336	1492.950	1498.599	1505.862	1499.406
5.0	1484.880	1491.336	1484.880	1478.424	1476.810	1478.424	1484.880	1491.336	1484.880
7.5	1463.898	1469.547	1463.091	1457.442	1454.214	1457.442	1463.091	1469.547	1463.898
10.0	1435.653	1442.109	1435.653	1429.197	1426.776	1429.197	1435.653	1442.109	1435.653
12.5	1396.917	1404.180	1397.724	1392.075	1388.847	1392.075	1397.724	1404.180	1396.917
15.0	1344.462	1352.532	1347.690	1342.041	1337.199	1342.041	1347.690	1352.532	1344.462
17.5	1275.060	1283.937	1281.516	1275.867	1269.411	1275.867	1281.516	1283.937	1275.060
20.0	1182.255	1194.360	1197.588	1189.518	1178.220	1189.518	1197.588	1194.360	1182.255
22.5	1061.205	1078.959	1091.871	1076.538	1057.977	1076.538	1091.871	1078.959	1061.205
25.0	908.682	938.541	965.172	937.734	907.068	937.734	965.172	938.541	908.682
27.5	738.324	778.755	818.298	776.818	734.773	776.818	818.298	778.755	738.324
30.0	571.275	614.450	659.965	607.671	560.300	607.671	659.965	614.450	571.275
32.5	414.717	459.829	508.006	450.467	397.367	450.467	508.006	459.829	414.717
35.0	277.366	329.740	375.336	318.039	263.808	318.039	375.336	329.740	277.366
37.5	184.319	225.395	273.734	217.002	174.715	217.002	273.734	225.395	184.319
40.0	129.443	156.719	201.346	149.941	123.148	149.941	201.346	156.719	129.443
42.5	99.907	114.917	149.779	110.398	95.952	110.398	149.779	114.917	99.907
45.0	82.475	91.352	112.254	88.609	80.700	88.609	112.254	91.352	82.475
47.5	70.612	76.504	87.640	75.212	69.483	75.212	87.640	76.504	70.612
50.0	61.171	65.690	71.258	64.883	60.202	64.883	71.258	65.690	61.171
52.5	53.181	56.974	59.557	56.248	52.294	56.248	59.557	56.974	53.181
55.0	46.483	49.388	50.195	48.743	45.515	48.743	50.195	49.388	46.483
57.5	40.834	42.771	42.367	42.206	40.108	42.206	42.367	42.771	40.834
60.0	35.911	36.880	35.589	36.557	35.508	36.557	35.589	36.880	35.911
62.5	31.069	31.473	29.778	31.392	31.069	31.392	29.778	31.473	31.069
65.0	26.550	26.470	24.533	26.550	26.631	26.550	24.533	26.470	26.550
67.5	22.112	21.789	19.933	21.950	22.192	21.950	19.933	21.789	22.112
70.0	17.835	17.431	15.817	17.673	17.996	17.673	15.817	17.431	17.835
72.5	13.558	13.315	12.024	13.477	13.800	13.477	12.024	13.315	13.558
75.0	9.361	9.442	8.635	9.603	9.442	9.603	8.635	9.442	9.361
77.5	4.761	5.568	5.730	5.649	5.165	5.649	5.730	5.568	4.761
80.0	3.470	3.470	3.551	3.389	3.389	3.389	3.551	3.470	3.470
82.5	2.421	2.421	2.340	2.340	2.340	2.340	2.340	2.421	2.421
85.0	1.453	1.453	1.453	1.453	1.453	1.453	1.453	1.453	1.453
87.5	0.646	0.646	0.646	0.646	0.646	0.646	0.646	0.646	0.646
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.734	1.010	1.102	1.193	1.285	1.193	1.102	1.010	0.734
95.0	4.131	3.856	3.672	4.039	4.406	4.039	3.672	3.856	4.131
97.5	7.528	7.252	7.069	7.528	7.895	7.528	7.069	7.252	7.528
100.0	11.475	11.291	11.016	11.567	11.934	11.567	11.016	11.291	11.475
102.5	15.881	15.790	15.422	16.065	16.249	16.065	15.422	15.790	15.881
105.0	20.747	20.747	20.288	21.114	21.206	21.114	20.288	20.747	20.747
107.5	26.071	26.071	25.520	26.622	26.438	26.622	25.520	26.071	26.071
110.0	31.855	31.946	31.396	32.497	32.038	32.497	31.396	31.946	31.855
112.5	37.913	38.281	37.730	38.740	38.005	38.740	37.730	38.281	37.913
115.0	44.339	45.257	44.615	45.441	44.339	45.441	44.615	45.257	44.339
117.5	51.133	52.418	51.959	52.877	51.133	52.877	51.959	52.418	51.133
120.0	58.018	59.486	59.854	60.496	58.201	60.496	59.854	59.486	58.018
122.5	64.352	67.014	68.483	68.391	65.545	68.391	68.483	67.014	64.352
125.0	71.512	75.643	78.397	77.204	72.981	77.204	78.397	75.643	71.512
127.5	80.233	85.649	89.964	87.394	81.794	87.394	89.964	85.649	80.233
130.0	91.157	98.134	103.550	99.603	92.534	99.603	103.550	98.134	91.157
132.5	105.019	113.281	119.432	114.566	106.029	114.566	119.432	113.281	105.019

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<b>135.0</b>	121.635	130.815	136.966	131.825	122.186	131.825	136.966	130.815	121.635
<b>137.5</b>	141.005	150.185	157.345	151.103	141.280	151.103	157.345	150.185	141.005
<b>140.0</b>	163.037	171.666	183.049	173.043	163.037	173.043	183.049	171.666	163.037
<b>142.5</b>	186.538	196.452	216.923	199.390	186.538	199.390	216.923	196.452	186.538
<b>145.0</b>	212.976	228.215	264.659	232.805	215.271	232.805	264.659	228.215	212.976
<b>147.5</b>	249.237	273.748	329.287	278.154	253.368	278.154	329.287	273.748	249.237
<b>150.0</b>	303.766	340.394	406.031	342.230	305.786	342.230	406.031	340.394	303.766
<b>152.5</b>	384.458	424.942	491.773	427.696	382.531	427.696	491.773	424.942	384.458
<b>155.0</b>	488.192	529.594	597.710	537.489	491.314	537.489	597.710	529.594	488.192
<b>157.5</b>	631.217	679.504	751.842	698.873	649.669	698.873	751.842	679.504	631.217
<b>160.0</b>	874.395	930.852	1009.800	963.900	910.840	963.900	1009.800	930.852	874.395
<b>162.5</b>	1291.626	1343.952	1416.474	1377.000	1325.592	1377.000	1416.474	1343.952	1291.626
<b>165.0</b>	1864.458	1900.260	1951.668	1915.866	1872.720	1915.866	1951.668	1900.260	1864.458
<b>167.5</b>	2463.912	2477.682	2501.550	2474.010	2444.634	2474.010	2501.550	2477.682	2463.912
<b>170.0</b>	2938.518	2932.092	2940.354	2929.338	2915.568	2929.338	2940.354	2932.092	2938.518
<b>172.5</b>	3244.213	3232.279	3236.869	3238.705	3237.787	3238.705	3236.869	3232.279	3244.213
<b>175.0</b>	3449.844	3438.828	3445.254	3452.598	3456.270	3452.598	3445.254	3438.828	3449.844
<b>177.5</b>	3594.888	3581.118	3583.872	3593.970	3598.560	3593.970	3583.872	3581.118	3594.888
<b>180.0</b>	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000

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Zone	Lumens	%Lamp	%Fixt
0-20	514.55	N.A.	18.50
0-30	933.94	N.A.	33.50
0-40	1146.42	N.A.	41.10
0-60	1267.27	N.A.	45.50
0-80	1303.28	N.A.	46.80
0-90	1304.97	N.A.	46.80
10-90	1164.9	N.A.	41.80
20-40	631.87	N.A.	22.70
20-50	708.60	N.A.	25.40
40-70	146.81	N.A.	5.30
60-80	36.01	N.A.	1.30
70-80	10.05	N.A.	0.40
80-90	1.69	N.A.	0.10
90-110	27.17	N.A.	1.00
90-120	71.89	N.A.	2.60
90-130	140.63	N.A.	5.00
90-150	393.83	N.A.	14.10
90-180	1481.52	N.A.	53.20
110-180	1454.35	N.A.	52.20
0-180	2786.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	140.07
10-20	374.48
20-30	419.39
30-40	212.48
40-50	76.73
50-60	44.12
60-70	25.97
70-80	10.05
80-90	1.69
90-100	4.93
100-110	22.24
110-120	44.72
120-130	68.75
130-140	101.64
140-150	151.55
150-160	259.83
160-170	514.79
170-180	313.08

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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	99	96	92	90	91	88	86	83	74	73	71	62	61	60	50	49	49	43
2	92	86	81	77	85	80	76	72	68	65	63	57	55	53	47	46	45	40
3	86	78	72	67	79	73	67	63	62	59	56	53	50	48	44	42	41	37
4	80	71	65	60	74	66	61	56	57	53	50	49	46	44	41	39	38	34
5	75	65	58	53	69	61	55	51	53	49	45	46	43	40	39	37	35	32
6	70	60	53	48	65	56	50	46	49	45	41	43	39	37	37	34	33	30
7	65	55	48	44	61	52	46	42	46	41	38	40	37	34	35	32	31	28
8	62	51	44	40	57	48	42	38	43	38	35	37	34	32	33	30	29	26
9	58	47	41	37	54	45	39	35	40	36	32	35	32	30	31	29	27	25
10	55	44	38	34	51	42	36	33	38	33	30	33	30	28	29	27	25	23

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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	12.9	13.6	14.0	14.6	16.0	UGR Viewed Endwise			
	3H	14.0	14.6	15.1	15.6	17.0	12.8	13.5	13.9	14.5
	4H	14.2	14.8	15.3	15.8	17.2	14.0	14.6	15.0	15.6
	6H	14.2	14.7	15.3	15.8	17.1	14.2	14.8	15.3	15.8
	8H	14.2	14.7	15.3	15.7	17.1	14.2	14.7	15.3	15.7
	12H	14.2	14.6	15.2	15.7	17.1	14.2	14.7	15.2	15.7

4H	2H	13.2	13.7	14.2	14.8	16.1	12.8	13.5	13.9	14.5
	3H	14.4	14.9	15.5	15.9	17.3	14.0	14.6	15.0	15.6
	4H	14.7	15.1	15.8	16.2	17.6	14.2	14.8	15.3	15.8
	6H	14.7	15.1	15.8	16.2	17.5	14.2	14.7	15.3	15.7
	8H	14.7	15.1	15.8	16.1	17.5	14.2	14.7	15.2	15.7
	12H	14.7	15.0	15.8	16.1	17.5	14.1	14.6	15.2	15.6

8H	4H	14.7	15.0	15.8	16.1	17.5	14.2	14.7	15.3	15.7
	6H	14.8	15.0	15.9	16.1	17.5	14.2	14.7	15.3	15.7
	8H	14.8	15.0	15.9	16.1	17.5	14.2	14.7	15.3	15.7
	12H	14.8	15.0	15.9	16.1	17.5	14.2	14.7	15.3	15.7

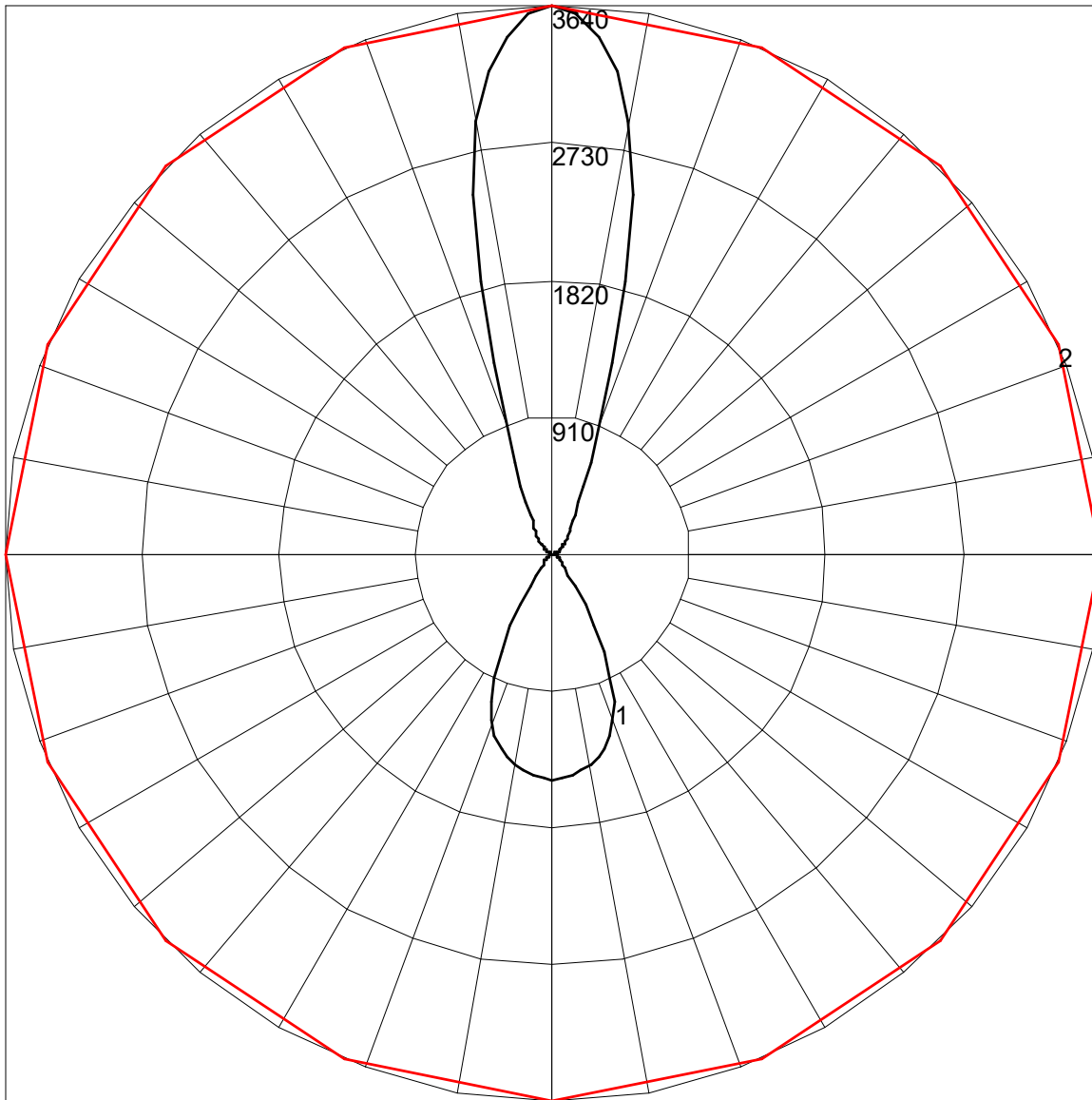
12H	4H	14.6	14.9	15.7	16.0	17.4	14.2	14.7	15.3	15.7
	6H	14.7	15.0	15.8	16.0	17.5	14.2	14.7	15.3	15.7
	8H	14.7	15.0	15.8	16.0	17.5	14.2	14.7	15.3	15.7

Maximum UGR = 17.6

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## POLAR GRAPH



Maximum Candela = 3640 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.)