



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OM-CSU-LN-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.18 and #13257153.22

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-L12-835U-L12-835D-xxx-DIM1-UNV-OM-CSU-LN-WHD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib anodized aluminum reflector trim w/clear cover glass up,
[MORE] narrow distrib white painted flush 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	2358
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
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-OM-CSU-LN-WHD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	37909	43094	37314
55	27663	29270	26720
65	22470	22280	22375
75	17029	16177	16488
85	10113	8735	9426

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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	4545.840	4545.840	4545.840	4545.840	4545.840	4545.840	4545.840	4545.840	4545.840
2.5	4381.416	4378.192	4382.222	4389.476	4390.282	4389.476	4382.222	4378.192	4381.416
5.0	3951.818	3942.952	3944.564	3943.758	3940.534	3943.758	3944.564	3942.952	3951.818
7.5	3296.540	3292.510	3284.450	3277.196	3273.166	3277.196	3284.450	3292.510	3296.540
10.0	2555.826	2549.378	2539.706	2524.392	2521.168	2524.392	2539.706	2549.378	2555.826
12.5	1863.472	1852.188	1842.516	1822.366	1816.724	1822.366	1842.516	1852.188	1863.472
15.0	1308.138	1301.690	1292.824	1267.838	1253.330	1267.838	1292.824	1301.690	1308.138
17.5	922.064	923.676	921.258	892.242	874.510	892.242	921.258	923.676	922.064
20.0	681.151	692.273	700.172	669.141	650.523	669.141	700.172	692.273	681.151
22.5	528.494	550.417	574.436	538.650	513.906	538.650	574.436	550.417	528.494
25.0	421.296	452.085	494.803	446.202	411.785	446.202	494.803	452.085	421.296
27.5	333.442	370.357	427.180	365.279	326.269	365.279	427.180	370.357	333.442
30.0	270.091	299.510	360.121	294.190	263.078	294.190	360.121	299.510	270.091
32.5	227.131	246.958	294.835	241.236	221.247	241.236	294.835	246.958	227.131
35.0	195.374	209.802	238.576	205.772	193.118	205.772	238.576	209.802	195.374
37.5	170.711	181.431	197.067	179.819	170.308	179.819	197.067	181.431	170.711
40.0	148.143	157.895	166.600	157.573	147.579	157.573	166.600	157.895	148.143
42.5	126.542	136.617	142.501	136.295	125.575	136.295	142.501	136.617	126.542
45.0	107.843	117.354	122.593	116.548	106.150	116.548	122.593	117.354	107.843
47.5	92.529	100.750	105.425	99.299	89.869	99.299	105.425	100.750	92.529
50.0	80.519	87.048	90.433	85.033	77.537	85.033	90.433	87.048	80.519
52.5	71.250	76.086	77.860	73.991	68.510	73.991	77.860	76.086	71.250
55.0	63.835	67.140	67.543	65.367	61.659	65.367	67.543	67.140	63.835
57.5	57.387	59.402	58.838	58.113	55.936	58.113	58.838	59.402	57.387
60.0	51.020	52.309	51.262	51.584	50.053	51.584	51.262	52.309	51.020
62.5	44.330	45.539	44.330	45.378	44.169	45.378	44.330	45.539	44.330
65.0	38.204	39.010	37.882	39.091	38.043	39.091	37.882	39.010	38.204
67.5	32.643	33.046	31.918	32.885	32.240	32.885	31.918	33.046	32.643
70.0	27.243	27.485	26.517	27.243	26.840	27.243	26.517	27.485	27.243
72.5	22.326	22.246	21.520	22.084	21.762	22.084	21.520	22.246	22.326
75.0	17.732	17.490	16.845	17.329	17.168	17.329	16.845	17.490	17.732
77.5	13.541	13.299	12.735	13.057	12.977	13.057	12.735	13.299	13.541
80.0	9.753	9.511	9.108	9.350	9.350	9.350	9.108	9.511	9.753
82.5	6.448	6.126	5.803	6.045	6.126	6.045	5.803	6.126	6.448
85.0	3.546	3.224	3.063	3.224	3.305	3.224	3.063	3.224	3.546
87.5	0.564	0.887	1.048	1.209	1.290	1.209	1.048	0.887	0.564
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
95.0	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
97.5	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
100.0	0.199	0.199	0.199	0.199	0.299	0.199	0.199	0.199	0.199
102.5	0.299	0.299	0.299	0.299	0.398	0.299	0.299	0.299	0.299
105.0	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498
107.5	0.597	0.597	0.597	0.597	0.697	0.597	0.597	0.597	0.597
110.0	0.896	0.796	1.095	0.896	0.896	0.896	1.095	0.796	0.896
112.5	1.194	1.095	3.682	1.194	1.294	1.194	3.682	1.095	1.194
115.0	1.592	4.975	11.642	5.373	1.692	5.373	11.642	4.975	1.592
117.5	11.144	19.701	23.681	20.000	10.348	20.000	23.681	19.701	11.144
120.0	29.950	37.014	37.213	38.407	30.149	38.407	37.213	37.014	29.950
122.5	49.153	53.233	51.740	55.720	51.044	55.720	51.740	53.233	49.153
125.0	68.854	69.750	66.964	73.232	71.740	73.232	66.964	69.750	68.854
127.5	90.147	86.963	82.784	91.341	93.829	91.341	82.784	86.963	90.147
130.0	111.938	105.868	99.600	110.744	116.813	110.744	99.600	105.868	111.938
132.5	134.126	126.863	118.803	132.236	140.594	132.236	118.803	126.863	134.126

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135.0	157.509	150.444	141.887	156.016	165.170	156.016	141.887	150.444	157.509
137.5	183.478	178.006	171.837	183.777	191.836	183.777	171.837	178.006	183.478
140.0	214.821	212.134	211.836	217.408	222.880	217.408	211.836	212.134	214.821
142.5	253.228	254.919	263.476	258.999	260.193	258.999	263.476	254.919	253.228
145.0	300.888	308.550	324.967	310.938	306.560	310.938	324.967	308.550	300.888
147.5	362.280	376.409	395.115	377.006	366.558	377.006	395.115	376.409	362.280
150.0	441.084	459.491	473.322	458.098	443.074	458.098	473.322	459.491	441.084
152.5	536.504	552.225	557.897	549.539	534.614	549.539	557.897	552.225	536.504
155.0	638.094	647.646	649.636	645.059	633.915	645.059	649.636	647.646	638.094
157.5	735.206	742.867	745.255	740.877	731.027	740.877	745.255	742.867	735.206
160.0	831.223	839.084	843.263	838.288	829.532	838.288	843.263	839.084	831.223
162.5	930.126	937.489	943.260	936.793	930.226	936.793	943.260	937.489	930.126
165.0	1028.830	1033.805	1040.770	1033.805	1027.835	1033.805	1040.770	1033.805	1028.830
167.5	1122.360	1125.345	1129.325	1124.350	1121.365	1124.350	1129.325	1125.345	1122.360
170.0	1206.935	1207.930	1206.935	1206.935	1205.940	1206.935	1206.935	1207.930	1206.935
172.5	1276.585	1276.585	1274.595	1274.595	1275.590	1274.595	1274.595	1276.585	1276.585
175.0	1330.315	1331.310	1329.320	1329.320	1330.315	1329.320	1329.320	1331.310	1330.315
177.5	1368.125	1368.125	1365.140	1366.135	1367.130	1366.135	1365.140	1368.125	1368.125
180.0	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000

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Zone	Lumens	%Lamp	%Fixt
0-20	703.77	N.A.	29.80
0-30	914.66	N.A.	38.80
0-40	1050.69	N.A.	44.60
0-60	1200.84	N.A.	50.90
0-80	1257.8	N.A.	53.30
0-90	1261.88	N.A.	53.50
10-90	931.23	N.A.	39.50
20-40	346.92	N.A.	14.70
20-50	437.51	N.A.	18.60
40-70	188.51	N.A.	8.00
60-80	56.96	N.A.	2.40
70-80	18.59	N.A.	0.80
80-90	4.08	N.A.	0.20
90-110	0.66	N.A.	0.00
90-120	11.49	N.A.	0.50
90-130	74.28	N.A.	3.20
90-150	392.69	N.A.	16.70
90-180	1095.83	N.A.	46.50
110-180	1095.17	N.A.	46.50
0-180	2357.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	330.64
10-20	373.12
20-30	210.90
30-40	136.03
40-50	90.59
50-60	59.56
60-70	38.36
70-80	18.59
80-90	4.08
90-100	0.14
100-110	0.52
110-120	10.83
120-130	62.79
130-140	119.48
140-150	198.92
150-160	293.61
160-170	286.51
170-180	123.03

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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	101	98	94	92	94	91	88	86	78	77	75	67	66	65	56	55	55	50
2	94	89	84	80	88	83	79	75	72	69	67	62	60	58	53	52	51	46
3	88	81	75	71	82	76	71	67	67	63	60	58	56	53	50	48	47	43
4	83	74	68	63	77	70	65	60	62	58	55	54	52	49	47	46	44	41
5	78	69	62	58	73	65	59	55	58	54	50	51	48	46	45	43	41	39
6	73	64	57	53	69	61	55	51	54	50	47	49	45	43	43	41	39	37
7	70	60	53	49	65	57	51	47	51	47	44	46	43	40	41	39	37	35
8	66	56	50	46	62	53	48	44	49	44	41	44	41	38	40	37	36	34
9	63	53	47	43	59	51	45	41	46	42	39	42	39	36	38	36	34	32
10	60	50	44	40	57	48	43	39	44	40	37	40	37	35	37	34	33	31

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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	16.0	16.7	16.9	17.6	18.9	15.8	16.5	16.8	17.5	18.7
	3H	17.2	17.9	18.2	18.8	20.1	17.1	17.7	18.1	18.7	20.0
	4H	17.6	18.2	18.6	19.2	20.5	17.5	18.1	18.5	19.1	20.3
	6H	17.9	18.4	18.9	19.4	20.7	17.7	18.3	18.7	19.3	20.5
	8H	17.9	18.4	18.9	19.4	20.7	17.8	18.3	18.8	19.3	20.6
	12H	17.9	18.4	18.9	19.4	20.7	17.8	18.3	18.8	19.3	20.6

UGR Viewed Endwise

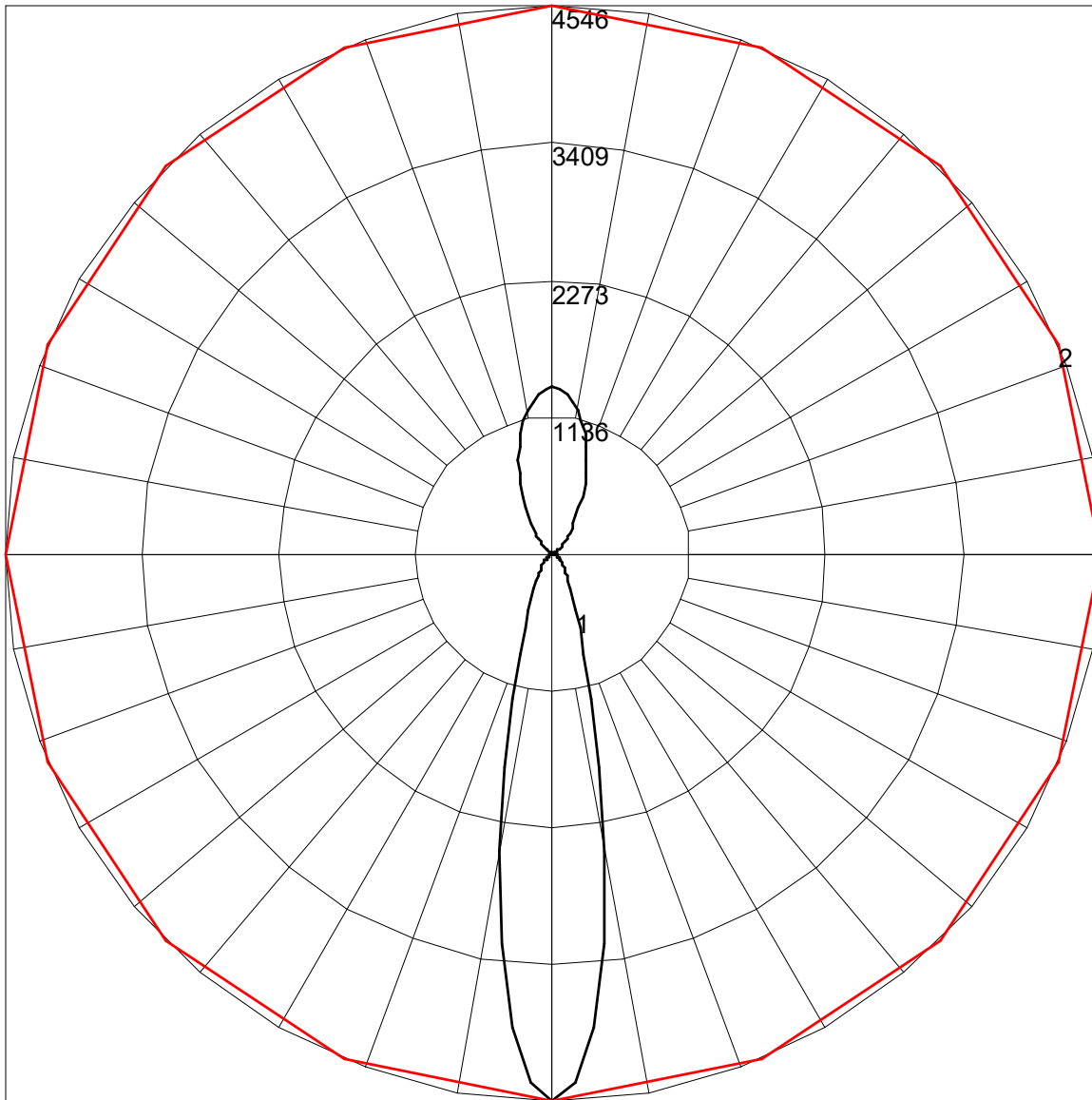
4H	2H	16.3	16.9	17.3	17.9	19.1	16.2	16.8	17.2	17.7	19.0
	3H	17.7	18.3	18.7	19.2	20.5	17.6	18.2	18.6	19.1	20.4
	4H	18.3	18.7	19.3	19.7	21.0	18.2	18.6	19.2	19.6	20.9
	6H	18.6	19.0	19.6	20.0	21.3	18.5	18.9	19.5	19.9	21.2
	8H	18.7	19.1	19.7	20.1	21.4	18.6	18.9	19.6	19.9	21.2
	12H	18.7	19.0	19.7	20.1	21.4	18.6	18.9	19.6	19.9	21.3
8H	4H	18.4	18.7	19.4	19.7	21.1	18.3	18.6	19.3	19.6	21.0
	6H	18.8	19.1	19.8	20.1	21.5	18.7	19.0	19.7	20.0	21.4
	8H	18.9	19.2	20.0	20.2	21.6	18.8	19.1	19.9	20.1	21.5
	12H	19.0	19.2	20.1	20.3	21.6	18.9	19.1	19.9	20.1	21.5
12H	4H	18.3	18.7	19.4	19.7	21.0	18.2	18.6	19.3	19.6	20.9
	6H	18.8	19.1	19.8	20.1	21.4	18.7	19.0	19.7	20.0	21.3
	8H	19.0	19.2	20.0	20.2	21.6	18.8	19.1	19.9	20.1	21.5

Maximum UGR = 21.6

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POLAR GRAPH



Maximum Candela = 4545.84 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.)