



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 and #13257153.22

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2736
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
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 w/Sides
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	1.42 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2814	2396	2770
55	1525	1190	1473
65	866	625	862
75	394	269	381
85	79	49	74

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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	0.737	1.474	2.272	3.868	3.868	3.868	2.272	1.474	0.737
95.0	2.395	3.193	3.868	5.526	5.649	5.526	3.868	3.193	2.395
97.5	5.465	5.833	6.263	7.982	8.166	7.982	6.263	5.833	5.465
100.0	8.596	9.087	9.456	11.236	11.482	11.236	9.456	9.087	8.596
102.5	12.280	12.894	13.078	14.982	15.289	14.982	13.078	12.894	12.280
105.0	16.210	16.885	17.008	19.157	19.280	19.157	17.008	16.885	16.210
107.5	20.323	21.183	21.367	23.639	23.578	23.639	21.367	21.183	20.323
110.0	24.683	25.727	25.911	28.305	28.244	28.305	25.911	25.727	24.683
112.5	29.349	30.516	30.639	33.340	33.156	33.340	30.639	30.516	29.349
115.0	34.016	35.612	35.796	38.375	37.945	38.375	35.796	35.612	34.016
117.5	38.436	40.524	40.892	43.410	42.612	43.410	40.892	40.524	38.436
120.0	43.041	45.313	45.866	48.015	46.971	48.015	45.866	45.313	43.041
122.5	47.217	49.980	50.716	52.190	50.655	52.190	50.716	49.980	47.217
125.0	50.716	54.155	55.444	56.120	53.971	56.120	55.444	54.155	50.716
127.5	54.400	58.698	60.847	60.356	57.777	60.356	60.847	58.698	54.400
130.0	58.944	64.654	67.479	65.944	62.382	65.944	67.479	64.654	58.944
132.5	65.821	72.820	76.382	73.496	69.382	73.496	72.820	76.382	65.821

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135.0	76.443	84.425	89.521	84.548	80.373	84.548	89.521	84.425	76.443
137.5	92.223	101.433	110.766	100.205	96.214	100.205	110.766	101.433	92.223
140.0	114.572	127.282	146.193	122.800	117.765	122.800	146.193	127.282	114.572
142.5	146.992	167.315	207.348	158.473	149.263	158.473	207.348	167.315	146.992
145.0	195.436	230.004	302.825	215.944	195.436	215.944	302.825	230.004	195.436
147.5	269.669	325.297	437.414	308.228	264.941	308.228	437.414	325.297	269.669
150.0	382.031	464.307	605.097	447.053	376.566	447.053	605.097	464.307	382.031
152.5	551.925	652.682	791.446	632.420	544.864	632.420	791.446	652.682	551.925
155.0	785.920	879.248	992.224	863.898	777.938	863.898	992.224	879.248	785.920
157.5	1072.658	1138.970	1212.036	1130.374	1059.150	1130.374	1212.036	1138.970	1072.658
160.0	1377.816	1410.358	1457.636	1417.112	1371.062	1417.112	1457.636	1410.358	1377.816
162.5	1649.204	1668.238	1692.798	1679.904	1655.958	1679.904	1692.798	1668.238	1649.204
165.0	1881.296	1888.050	1900.330	1896.032	1884.366	1896.032	1900.330	1888.050	1881.296
167.5	2064.882	2059.970	2071.022	2069.180	2064.268	2069.180	2071.022	2059.970	2064.882
170.0	2199.348	2193.208	2192.594	2190.138	2188.296	2190.138	2192.594	2193.208	2199.348
172.5	2276.712	2273.028	2269.344	2263.818	2261.976	2263.818	2269.344	2273.028	2276.712
175.0	2312.938	2310.482	2308.026	2306.184	2304.956	2306.184	2308.026	2310.482	2312.938
177.5	2313.552	2318.464	2320.306	2323.376	2324.604	2323.376	2320.306	2318.464	2313.552
180.0	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000

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Zone	Lumens	%Lamp	%Fixt
0-20	703.77	N.A.	25.70
0-30	914.66	N.A.	33.40
0-40	1050.69	N.A.	38.40
0-60	1200.84	N.A.	43.90
0-80	1257.8	N.A.	46.00
0-90	1261.88	N.A.	46.10
10-90	931.23	N.A.	34.00
20-40	346.92	N.A.	12.70
20-50	437.51	N.A.	16.00
40-70	188.51	N.A.	6.90
60-80	56.96	N.A.	2.10
70-80	18.59	N.A.	0.70
80-90	4.08	N.A.	0.10
90-110	23.89	N.A.	0.90
90-120	59.88	N.A.	2.20
90-130	108.92	N.A.	4.00
90-150	336.45	N.A.	12.30
90-180	1474.45	N.A.	53.90
110-180	1450.57	N.A.	53.00
0-180	2736.33	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	4.99
100-110	18.90
110-120	35.99
120-130	49.04
130-140	68.05
140-150	159.48
150-160	405.66
160-170	515.63
170-180	216.70

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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	97	97	97	97	81	81	81	66	66	66	53	53	53	46
1	99	95	92	90	91	88	85	83	74	72	71	61	60	59	50	49	48	43
2	92	86	81	77	85	80	76	72	68	65	63	57	55	53	47	46	45	40
3	86	78	73	68	79	73	68	64	63	59	56	53	51	49	44	43	41	37
4	80	72	65	61	74	67	61	57	58	54	51	50	47	45	42	40	39	35
5	75	66	59	55	70	62	56	52	54	50	47	47	44	41	40	38	36	33
6	71	61	55	50	66	57	52	48	50	46	43	44	41	39	38	36	34	32
7	67	57	50	46	62	54	48	44	47	43	40	42	39	36	36	34	33	30
8	63	53	47	42	59	50	45	41	45	41	37	40	36	34	35	33	31	29
9	60	50	44	40	56	47	42	38	42	38	35	38	35	32	33	31	30	28
10	57	47	41	37	53	45	39	36	40	36	33	36	33	31	32	30	28	27

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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	4.1	4.8	5.1	5.8	7.1	3.9	4.6	5.0	5.6	7.0
	3H	5.0	5.6	6.0	6.6	8.0	4.9	5.4	5.9	6.5	7.8
	4H	5.2	5.7	6.2	6.8	8.2	5.1	5.6	6.1	6.6	8.0
	6H	5.2	5.8	6.3	6.8	8.2	5.1	5.6	6.2	6.7	8.0
	8H	5.2	5.7	6.3	6.8	8.1	5.1	5.6	6.1	6.6	8.0
	12H	5.2	5.6	6.2	6.7	8.1	5.0	5.5	6.1	6.5	7.9

UGR Viewed Endwise

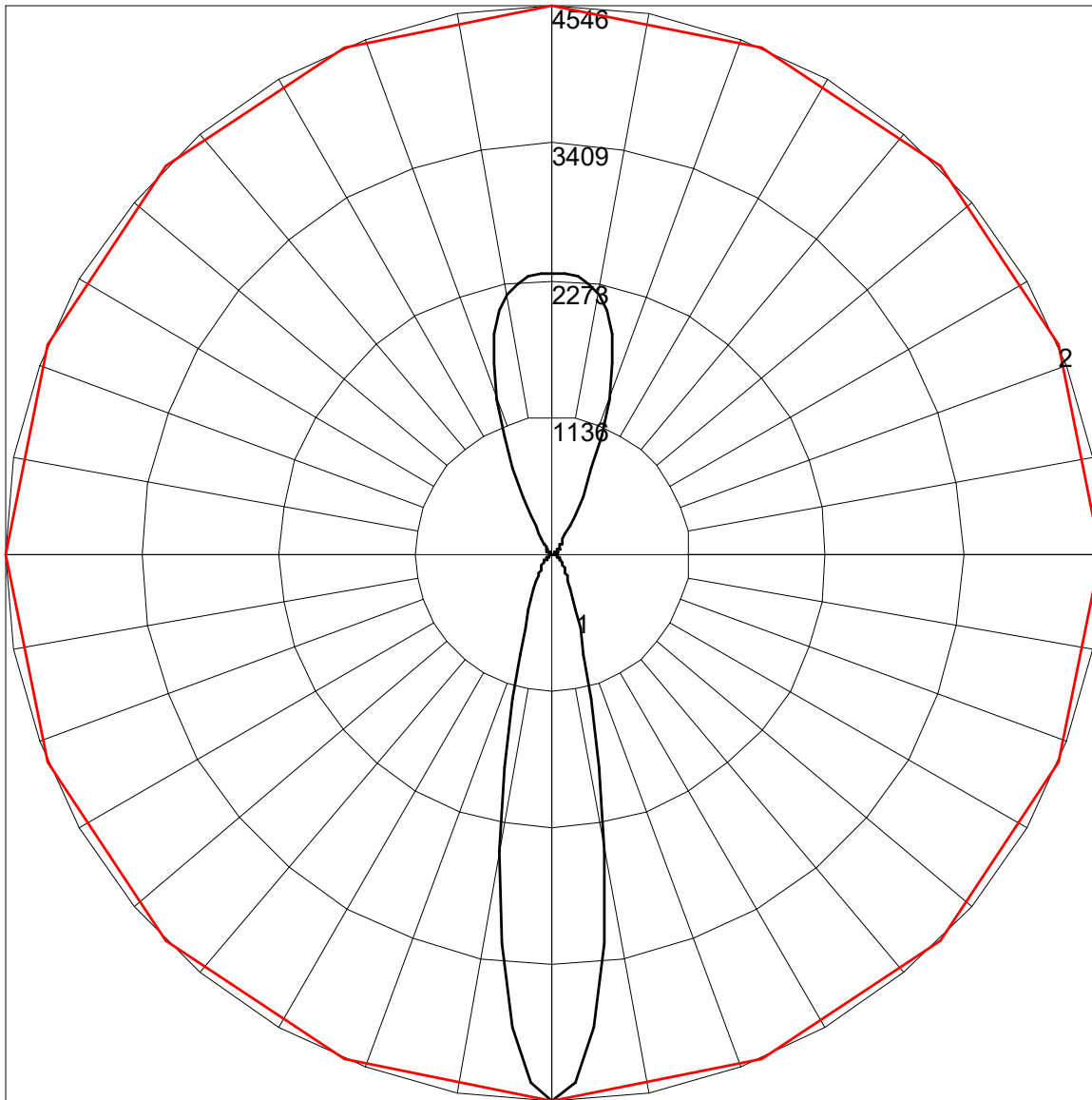
4H	2H	4.3	4.8	5.3	5.9	7.2	4.1	4.7	5.2	5.7	7.1
	3H	5.3	5.7	6.3	6.8	8.2	5.1	5.6	6.2	6.7	8.1
	4H	5.5	6.0	6.6	7.0	8.4	5.4	5.8	6.5	6.9	8.3
	6H	5.6	6.0	6.7	7.1	8.5	5.5	5.9	6.6	7.0	8.4
	8H	5.6	6.0	6.7	7.0	8.5	5.5	5.9	6.6	6.9	8.3
	12H	5.6	5.9	6.7	7.0	8.4	5.5	5.8	6.6	6.8	8.3
8H	4H	5.5	5.8	6.6	6.9	8.3	5.4	5.7	6.5	6.8	8.2
	6H	5.7	5.9	6.8	7.0	8.5	5.5	5.8	6.6	6.9	8.3
	8H	5.7	5.9	6.8	7.0	8.4	5.6	5.8	6.7	6.9	8.3
	12H	5.6	5.9	6.8	6.9	8.4	5.5	5.7	6.6	6.8	8.3
12H	4H	5.4	5.7	6.5	6.8	8.2	5.3	5.6	6.4	6.7	8.1
	6H	5.6	5.8	6.7	6.9	8.4	5.5	5.7	6.6	6.8	8.3
	8H	5.6	5.8	6.7	6.9	8.4	5.5	5.7	6.6	6.8	8.3

Maximum UGR = 8.5

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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.)