



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.19 and #13257153.22

[TESTLAB]

[ISSUE DATE] 4-FEB-2021

[MANUFAC] H E Williams Inc

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

[LUMINAIRE] White formed aluminum housing, medium 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

[_ 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	2743
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
Luminous Length (0-180)	0.21 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.00 ft

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	0.734	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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135.0	121.635	130.815	136.966	131.825	122.186	131.825	136.966	130.815	121.635
137.5	141.005	150.185	157.345	151.103	141.280	151.103	157.345	150.185	141.005
140.0	163.037	171.666	183.049	173.043	163.037	173.043	183.049	171.666	163.037
142.5	186.538	196.452	216.923	199.390	186.538	199.390	216.923	196.452	186.538
145.0	212.976	228.215	264.659	232.805	215.271	232.805	264.659	228.215	212.976
147.5	249.237	273.748	329.287	278.154	253.368	278.154	329.287	273.748	249.237
150.0	303.766	340.394	406.031	342.230	305.786	342.230	406.031	340.394	303.766
152.5	384.458	424.942	491.773	427.696	382.531	427.696	491.773	424.942	384.458
155.0	488.192	529.594	597.710	537.489	491.314	537.489	597.710	529.594	488.192
157.5	631.217	679.504	751.842	698.873	649.669	698.873	751.842	679.504	631.217
160.0	874.395	930.852	1009.800	963.900	910.840	963.900	1009.800	930.852	874.395
162.5	1291.626	1343.952	1416.474	1377.000	1325.592	1377.000	1416.474	1343.952	1291.626
165.0	1864.458	1900.260	1951.668	1915.866	1872.720	1915.866	1951.668	1900.260	1864.458
167.5	2463.912	2477.682	2501.550	2474.010	2444.634	2474.010	2501.550	2477.682	2463.912
170.0	2938.518	2932.092	2940.354	2929.338	2915.568	2929.338	2940.354	2932.092	2938.518
172.5	3244.213	3232.279	3236.869	3238.705	3237.787	3238.705	3236.869	3232.279	3244.213
175.0	3449.844	3438.828	3445.254	3452.598	3456.270	3452.598	3445.254	3438.828	3449.844
177.5	3594.888	3581.118	3583.872	3593.970	3598.560	3593.970	3583.872	3581.118	3594.888
180.0	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	703.77	N.A.	25.70
0-30	914.66	N.A.	33.30
0-40	1050.69	N.A.	38.30
0-60	1200.84	N.A.	43.80
0-80	1257.8	N.A.	45.80
0-90	1261.88	N.A.	46.00
10-90	931.23	N.A.	33.90
20-40	346.92	N.A.	12.60
20-50	437.51	N.A.	15.90
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	27.17	N.A.	1.00
90-120	71.89	N.A.	2.60
90-130	140.63	N.A.	5.10
90-150	393.83	N.A.	14.40
90-180	1481.52	N.A.	54.00
110-180	1454.35	N.A.	53.00
0-180	2743.4	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	4.93
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	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	99	95	92	90	91	88	85	83	74	72	71	61	60	59	49	49	48	43
2	92	86	81	77	85	80	76	72	68	65	63	57	55	53	47	45	44	40
3	86	78	73	68	79	73	68	64	62	59	56	53	51	49	44	43	41	37
4	80	72	65	60	74	67	61	57	58	54	51	49	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	54	50	66	57	52	47	50	46	43	44	41	39	38	36	34	32
7	67	57	50	46	62	54	48	44	47	43	40	42	38	36	36	34	32	30
8	63	53	47	42	59	50	45	41	45	40	37	39	36	34	35	32	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	15.3	16.0	16.3	17.0	18.3	15.2	15.8	16.2	16.9	18.2
	3H	16.6	17.2	17.6	18.2	19.6	16.4	17.1	17.5	18.1	19.4
	4H	17.0	17.5	18.0	18.6	19.9	16.8	17.4	17.9	18.4	19.8
	6H	17.2	17.7	18.3	18.8	20.1	17.1	17.6	18.1	18.6	20.0
	8H	17.3	17.8	18.3	18.8	20.2	17.1	17.6	18.2	18.7	20.0
	12H	17.3	17.7	18.3	18.8	20.2	17.1	17.6	18.2	18.6	20.0

UGR Viewed Endwise

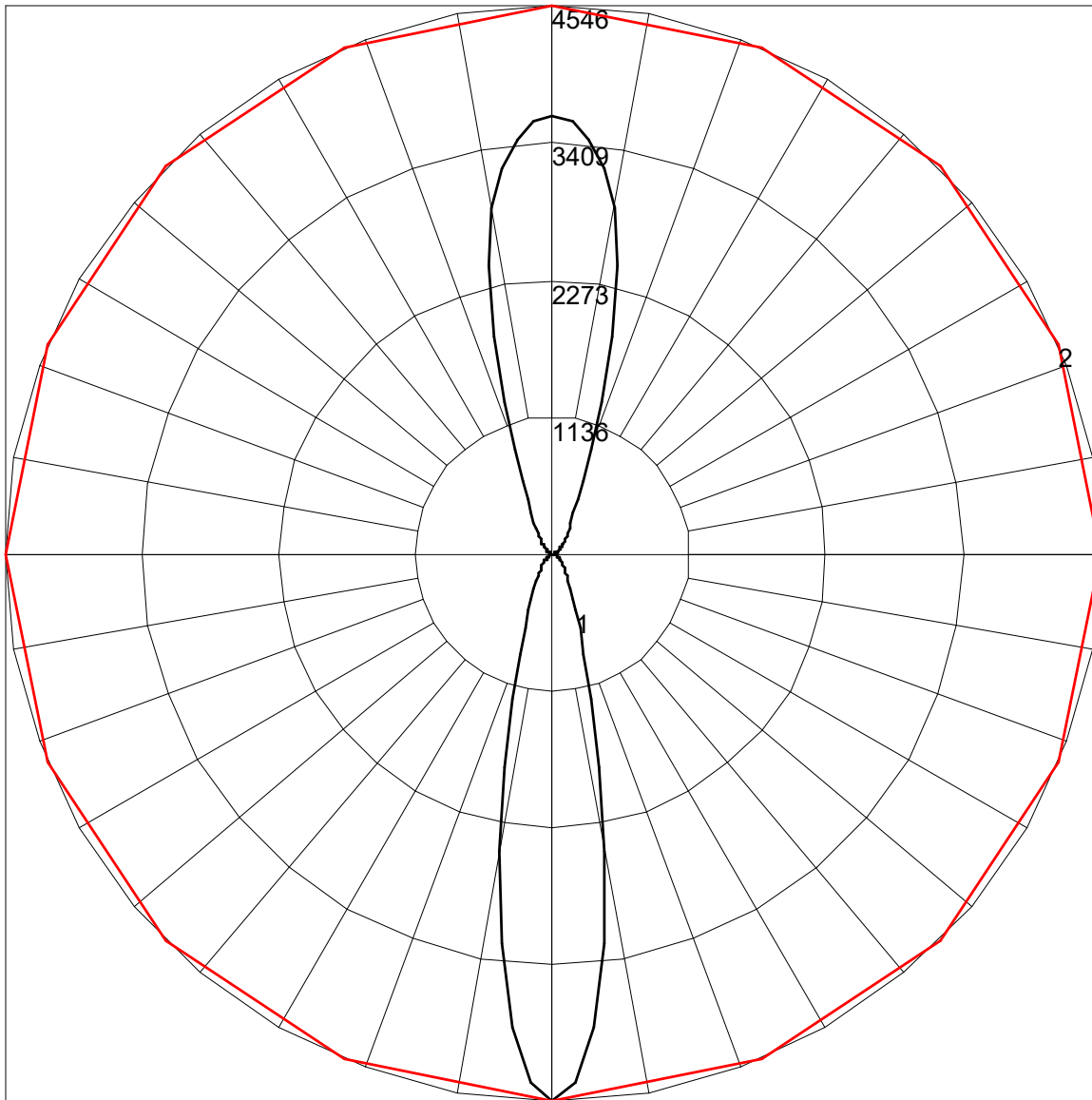
4H	2H	15.6	16.2	16.7	17.2	18.6	15.5	16.1	16.6	17.1	18.5
	3H	17.1	17.6	18.2	18.6	20.0	17.0	17.5	18.1	18.5	19.9
	4H	17.6	18.0	18.7	19.1	20.5	17.5	17.9	18.6	19.0	20.4
	6H	18.0	18.3	19.0	19.4	20.8	17.8	18.2	18.9	19.3	20.7
	8H	18.0	18.4	19.1	19.4	20.8	17.9	18.3	19.0	19.3	20.7
	12H	18.1	18.4	19.1	19.4	20.9	17.9	18.2	19.0	19.3	20.7
8H	4H	17.7	18.1	18.8	19.1	20.5	17.6	18.0	18.7	19.0	20.4
	6H	18.2	18.4	19.3	19.5	20.9	18.1	18.3	19.1	19.4	20.8
	8H	18.3	18.5	19.4	19.6	21.1	18.2	18.4	19.3	19.5	20.9
	12H	18.4	18.6	19.5	19.7	21.1	18.2	18.5	19.3	19.5	21.0
12H	4H	17.7	18.0	18.8	19.1	20.5	17.6	17.9	18.7	19.0	20.4
	6H	18.1	18.4	19.2	19.5	20.9	18.0	18.3	19.1	19.4	20.8
	8H	18.3	18.5	19.4	19.6	21.1	18.2	18.4	19.3	19.5	21.0

Maximum UGR = 21.1

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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.)