



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] Gen from UL #13257153.19

[TESTLAB]

[ISSUE DATE] 4-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

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

[MORE] medium 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	2782
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-LM-WHD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	37541	42272	37711
55	27209	29829	27768
65	22897	23039	22897
75	17494	17107	17881
85	10344	9195	11034

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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	3196.596	3196.596	3196.596	3196.596	3196.596	3196.596	3196.596	3196.596	3196.596
2.5	3156.296	3144.206	3146.624	3155.490	3159.520	3155.490	3146.624	3144.206	3156.296
5.0	3028.948	3019.276	3024.918	3031.366	3034.590	3031.366	3024.918	3019.276	3028.948
7.5	2848.404	2837.926	2841.956	2843.568	2842.762	2843.568	2841.956	2837.926	2848.404
10.0	2580.006	2574.364	2581.618	2571.946	2559.856	2571.946	2581.618	2574.364	2580.006
12.5	2163.304	2175.394	2196.350	2172.170	2146.378	2172.170	2196.350	2175.394	2163.304
15.0	1636.986	1668.420	1713.556	1682.122	1644.240	1682.122	1713.556	1668.420	1636.986
17.5	1134.042	1179.984	1243.658	1209.000	1163.864	1209.000	1243.658	1179.984	1134.042
20.0	767.715	817.284	886.600	846.300	799.713	846.300	886.600	817.284	767.715
22.5	554.206	596.601	660.114	613.608	570.406	613.608	660.114	596.601	554.206
25.0	428.631	464.981	524.787	471.913	431.371	471.913	524.787	464.981	428.631
27.5	337.553	373.097	431.774	375.515	335.860	375.515	431.774	373.097	337.553
30.0	266.705	298.865	356.494	300.477	268.479	300.477	356.494	298.865	266.705
32.5	218.829	240.349	289.112	244.218	222.456	244.218	289.112	240.349	218.829
35.0	186.992	200.372	232.370	204.402	189.007	204.402	232.370	200.372	186.992
37.5	163.779	172.484	190.458	175.063	163.779	175.063	190.458	172.484	163.779
40.0	143.146	150.722	160.716	151.931	143.146	151.931	160.716	150.722	143.146
42.5	123.802	131.862	138.148	132.668	124.043	132.668	138.148	131.862	123.802
45.0	106.795	114.855	120.255	115.742	107.279	115.742	120.255	114.855	106.795
47.5	92.206	99.460	104.861	100.589	93.093	100.589	104.861	99.460	92.206
50.0	80.036	86.161	90.917	87.451	81.245	87.451	90.917	86.161	80.036
52.5	70.444	75.200	78.988	76.731	71.815	76.731	78.988	75.200	70.444
55.0	62.787	66.414	68.832	67.785	64.077	67.785	68.832	66.414	62.787
57.5	56.501	58.838	60.128	60.047	57.548	60.047	60.128	58.838	56.501
60.0	50.939	52.229	52.551	53.115	51.100	53.115	52.551	52.229	50.939
62.5	44.894	46.023	45.620	46.426	44.894	46.426	45.620	46.023	44.894
65.0	38.930	39.736	39.172	39.897	38.930	39.897	39.172	39.736	38.930
67.5	33.288	33.610	33.127	34.013	33.368	34.013	33.127	33.610	33.288
70.0	27.968	28.049	27.565	28.532	28.129	28.532	27.565	28.049	27.968
72.5	22.890	22.890	22.407	23.374	23.213	23.374	22.407	22.890	22.890
75.0	18.216	18.216	17.813	18.538	18.619	18.538	17.813	18.216	18.216
77.5	13.944	13.863	13.541	14.105	14.266	14.105	13.541	13.863	13.944
80.0	10.075	9.914	9.672	10.156	10.478	10.156	9.672	9.914	10.075
82.5	6.609	6.367	6.206	6.609	6.932	6.609	6.206	6.367	6.609
85.0	3.627	3.385	3.224	3.546	3.869	3.546	3.224	3.385	3.627
87.5	0.645	0.887	0.967	1.048	1.128	1.048	0.967	0.887	0.645
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	726.87	N.A.	26.10
0-30	955.00	N.A.	34.30
0-40	1088.06	N.A.	39.10
0-60	1237.66	N.A.	44.50
0-80	1296.45	N.A.	46.60
0-90	1300.77	N.A.	46.80
10-90	1025.89	N.A.	36.90
20-40	361.19	N.A.	13.00
20-50	450.43	N.A.	16.20
40-70	188.86	N.A.	6.80
60-80	58.79	N.A.	2.10
70-80	19.53	N.A.	0.70
80-90	4.33	N.A.	0.20
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.	14.20
90-180	1481.52	N.A.	53.20
110-180	1454.35	N.A.	52.30
0-180	2782.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	274.89
10-20	451.98
20-30	228.13
30-40	133.06
40-50	89.24
50-60	60.36
60-70	39.26
70-80	19.53
80-90	4.33
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	54	47	46	45	40
3	86	78	73	68	79	73	68	64	63	59	56	53	51	49	44	43	42	38
4	80	72	65	61	74	67	62	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	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	39	36	36	34	32	30
8	63	53	47	42	59	50	44	41	45	40	37	39	36	34	35	32	31	29
9	60	50	44	39	56	47	42	38	42	38	35	38	34	32	33	31	29	28
10	57	47	41	37	53	45	39	36	40	36	33	36	33	31	32	30	28	26

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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	15.1	15.8	16.2	16.8	18.2	15.3	16.0	16.3	17.0	18.3
	3H	16.5	17.1	17.5	18.1	19.5	16.6	17.2	17.6	18.2	19.6
	4H	16.9	17.5	17.9	18.5	19.9	17.0	17.6	18.1	18.6	20.0
	6H	17.2	17.7	18.2	18.7	20.1	17.3	17.8	18.3	18.8	20.2
	8H	17.2	17.7	18.3	18.8	20.1	17.3	17.9	18.4	18.9	20.3
	12H	17.2	17.7	18.3	18.7	20.1	17.4	17.8	18.4	18.9	20.3

UGR Viewed Endwise

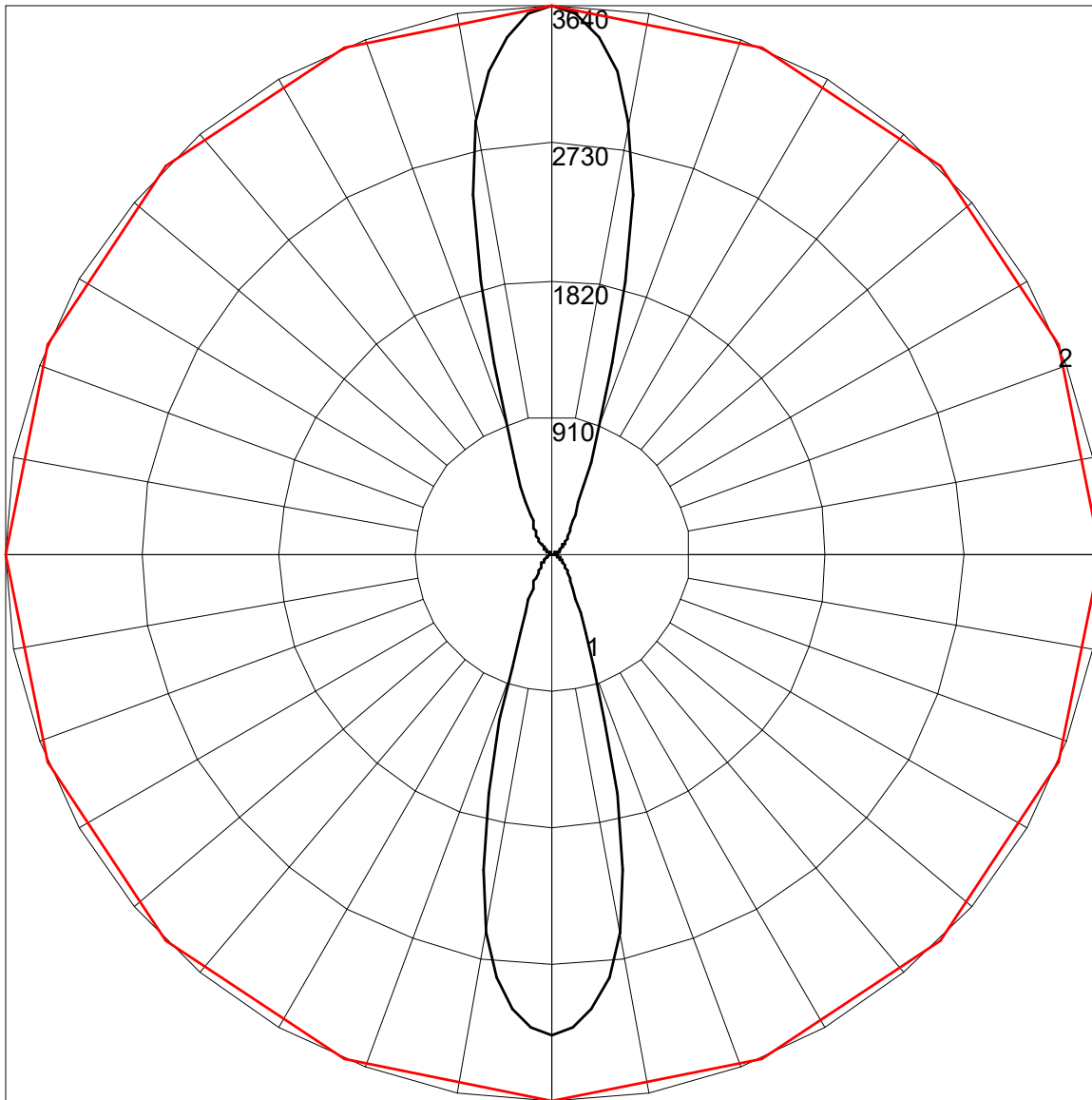
4H	2H	15.5	16.1	16.6	17.1	18.5	15.6	16.2	16.7	17.2	18.6
	3H	17.1	17.5	18.1	18.6	20.0	17.2	17.6	18.2	18.7	20.0
	4H	17.6	18.0	18.7	19.1	20.5	17.7	18.1	18.8	19.2	20.6
	6H	18.0	18.3	19.0	19.4	20.8	18.1	18.4	19.1	19.5	20.9
	8H	18.0	18.4	19.1	19.4	20.9	18.2	18.5	19.2	19.6	21.0
	12H	18.1	18.4	19.2	19.5	20.9	18.2	18.5	19.3	19.6	21.0
8H	4H	17.7	18.1	18.8	19.1	20.5	17.8	18.2	18.9	19.2	20.6
	6H	18.2	18.5	19.3	19.6	21.0	18.3	18.6	19.4	19.7	21.1
	8H	18.3	18.6	19.4	19.7	21.1	18.4	18.7	19.5	19.8	21.2
	12H	18.4	18.6	19.5	19.7	21.2	18.5	18.7	19.6	19.8	21.3
12H	4H	17.7	18.0	18.8	19.1	20.5	17.8	18.1	18.9	19.2	20.6
	6H	18.2	18.4	19.3	19.5	20.9	18.3	18.5	19.4	19.6	21.0
	8H	18.4	18.6	19.5	19.6	21.1	18.5	18.7	19.6	19.7	21.2

Maximum UGR = 21.3

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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.)