



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.19 and #13257153.23

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

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

[MORE] narrow 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	2746
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

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	38750	46863	39062
55	22977	26474	23466
65	17942	16422	17656
75	10075	9378	9610
85	4603	4603	4603

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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	4540.182	4540.182	4540.182	4540.182	4540.182	4540.182	4540.182	4540.182	4540.182
2.5	4415.097	4382.010	4378.782	4379.589	4381.203	4379.589	4378.782	4382.010	4415.097
5.0	3976.089	3945.423	3937.353	3935.739	3933.318	3935.739	3937.353	3945.423	3976.089
7.5	3290.946	3270.771	3274.806	3282.069	3282.069	3282.069	3274.806	3270.771	3290.946
10.0	2516.226	2503.314	2524.296	2545.278	2553.348	2545.278	2524.296	2503.314	2516.226
12.5	1799.610	1794.768	1827.855	1855.293	1863.363	1855.293	1827.855	1794.768	1799.610
15.0	1246.815	1249.236	1276.674	1305.726	1312.989	1305.726	1276.674	1249.236	1246.815
17.5	880.437	886.086	910.296	929.664	928.857	929.664	910.296	886.086	880.437
20.0	663.838	675.298	696.360	699.104	691.760	699.104	696.360	675.298	663.838
22.5	538.592	554.490	576.521	562.640	547.549	562.640	576.521	554.490	538.592
25.0	451.355	474.919	501.793	474.677	451.516	474.677	501.793	474.919	451.355
27.5	373.157	405.275	444.092	403.903	373.076	403.903	444.092	405.275	373.157
30.0	301.899	335.631	387.925	337.003	305.207	337.003	387.925	335.631	301.899
32.5	245.731	273.250	329.417	277.527	251.461	277.527	329.417	273.250	245.731
35.0	205.301	224.669	274.461	230.641	210.546	230.641	274.461	224.669	205.301
37.5	179.880	189.806	226.444	194.487	181.010	194.487	226.444	189.806	179.880
40.0	156.800	165.031	188.757	166.484	156.397	166.484	188.757	165.031	156.800
42.5	132.994	142.758	159.382	143.081	133.074	143.081	159.382	142.758	132.994
45.0	110.236	120.969	133.316	121.534	111.124	121.534	133.316	120.969	110.236
47.5	90.223	100.714	110.962	101.601	91.756	101.601	110.962	100.714	90.223
50.0	73.921	82.879	91.433	84.251	75.535	84.251	91.433	82.879	73.921
52.5	61.735	68.434	74.809	69.967	63.188	69.967	74.809	68.434	61.735
55.0	53.020	57.539	61.090	58.750	54.150	58.750	61.090	57.539	53.020
57.5	46.645	48.985	49.953	49.873	47.209	49.873	49.953	48.985	46.645
60.0	41.238	42.125	41.076	42.529	41.157	42.529	41.076	42.125	41.238
62.5	35.992	36.073	34.055	35.992	35.508	35.992	34.055	36.073	35.992
65.0	30.505	30.343	27.922	30.101	30.020	30.101	27.922	30.343	30.505
67.5	25.259	24.856	22.596	24.613	24.856	24.613	22.596	24.856	25.259
70.0	20.175	19.771	17.915	19.449	19.771	19.449	17.915	19.771	20.175
72.5	15.252	14.929	13.638	14.687	14.929	14.687	13.638	14.929	15.252
75.0	10.491	10.491	9.765	10.330	10.007	10.330	9.765	10.491	10.491
77.5	5.084	6.133	6.537	6.214	5.730	6.214	6.537	6.133	5.084
80.0	3.874	3.793	4.116	3.874	3.793	3.874	4.116	3.793	3.874
82.5	2.663	2.663	2.663	2.744	2.663	2.744	2.663	2.663	2.663
85.0	1.614	1.614	1.614	1.695	1.614	1.695	1.614	1.614	1.614
87.5	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726	0.726
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	701.85	N.A.	25.60
0-30	923.67	N.A.	33.60
0-40	1073.85	N.A.	39.10
0-60	1221.54	N.A.	44.50
0-80	1262.32	N.A.	46.00
0-90	1264.23	N.A.	46.00
10-90	934.07	N.A.	34.00
20-40	372.00	N.A.	13.50
20-50	466.64	N.A.	17.00
40-70	177.31	N.A.	6.50
60-80	40.78	N.A.	1.50
70-80	11.17	N.A.	0.40
80-90	1.90	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.	14.30
90-180	1481.52	N.A.	54.00
110-180	1454.35	N.A.	53.00
0-180	2745.75	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	330.16
10-20	371.69
20-30	221.82
30-40	150.17
40-50	94.64
50-60	53.06
60-70	29.61
70-80	11.17
80-90	1.90
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	96	93	90	91	88	86	83	74	73	71	61	60	59	50	49	49	43
2	92	86	82	78	85	80	76	73	68	65	63	57	55	54	47	46	45	40
3	86	79	73	68	79	73	68	64	63	59	56	53	51	49	44	43	42	38
4	81	72	66	61	75	67	62	58	58	54	51	50	47	45	42	40	39	36
5	76	66	60	55	70	62	56	52	54	50	47	47	44	42	40	38	37	34
6	71	61	55	50	66	58	52	48	51	47	43	44	41	39	38	36	35	32
7	67	57	51	46	62	54	48	44	48	43	40	42	39	37	36	34	33	30
8	63	53	47	43	59	50	45	41	45	41	38	40	37	34	35	33	31	29
9	60	50	44	40	56	48	42	38	43	38	36	38	35	33	33	31	30	28
10	57	47	41	37	54	45	40	36	40	36	34	36	33	31	32	30	29	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	14.0	14.6	15.0	15.6	17.0	14.1	14.7	15.1	15.7	17.1
	3H	15.0	15.6	16.0	16.6	18.0	15.1	15.7	16.1	16.7	18.0
	4H	15.2	15.8	16.3	16.8	18.2	15.2	15.8	16.3	16.8	18.2
	6H	15.2	15.7	16.3	16.7	18.1	15.2	15.8	16.3	16.8	18.2
	8H	15.2	15.7	16.2	16.7	18.1	15.2	15.7	16.3	16.7	18.1
	12H	15.1	15.6	16.2	16.6	18.0	15.2	15.6	16.2	16.7	18.1

### UGR Viewed Endwise

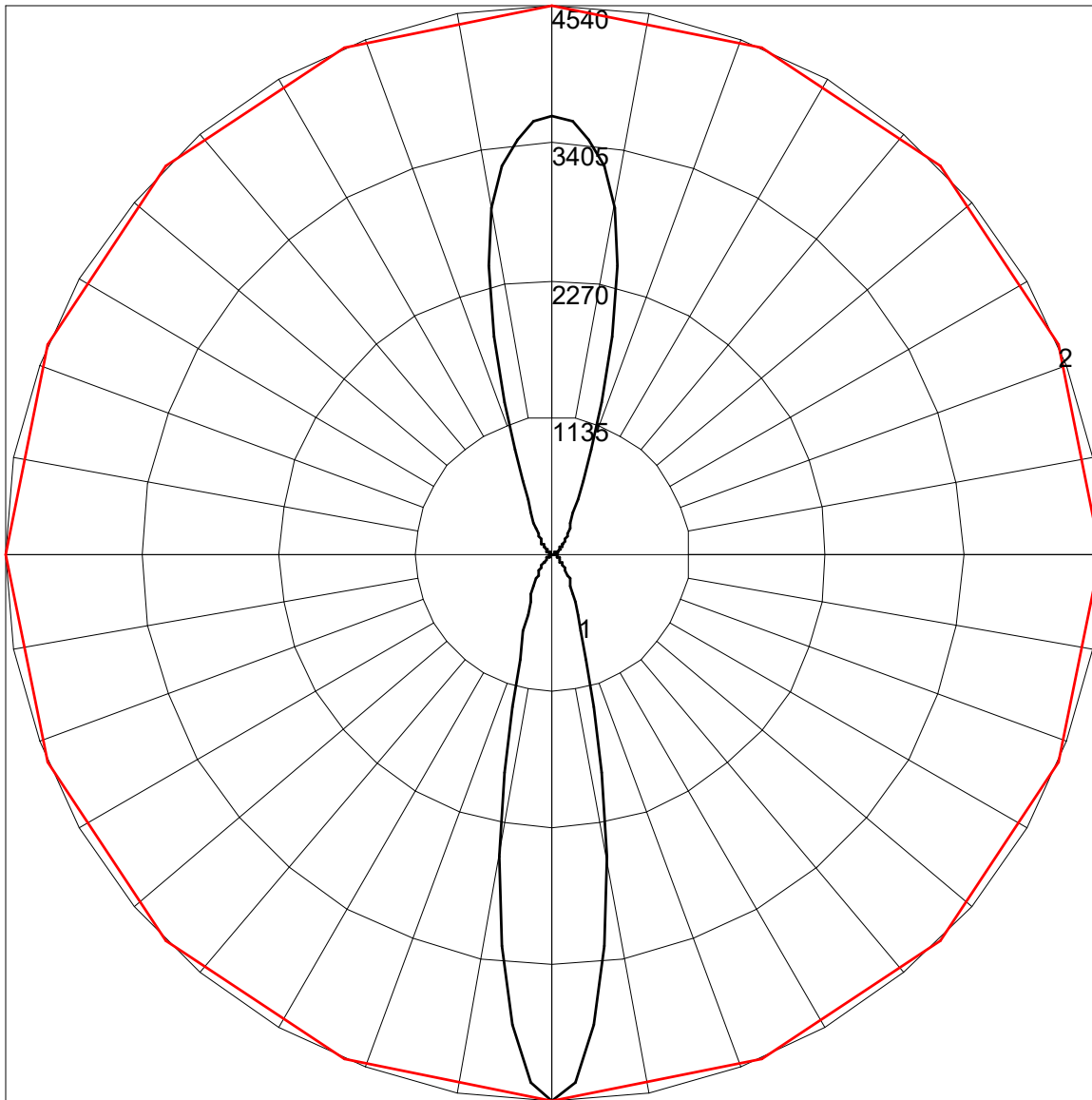
4H	2H	14.2	14.7	15.2	15.8	17.1	14.3	14.8	15.3	15.9	17.2
	3H	15.4	15.8	16.4	16.9	18.3	15.4	15.9	16.5	16.9	18.3
	4H	15.7	16.1	16.7	17.1	18.5	15.7	16.1	16.7	17.1	18.5
	6H	15.7	16.1	16.8	17.1	18.5	15.7	16.1	16.8	17.1	18.5
	8H	15.7	16.0	16.7	17.1	18.5	15.7	16.0	16.8	17.1	18.5
	12H	15.6	15.9	16.7	17.0	18.4	15.7	16.0	16.7	17.0	18.5
8H	4H	15.7	16.0	16.7	17.0	18.5	15.7	16.0	16.7	17.1	18.5
	6H	15.7	16.0	16.8	17.1	18.5	15.7	16.0	16.8	17.1	18.5
	8H	15.7	16.0	16.8	17.1	18.5	15.7	16.0	16.8	17.1	18.5
	12H	15.7	15.9	16.8	17.0	18.5	15.7	16.0	16.8	17.0	18.5
12H	4H	15.6	15.9	16.7	17.0	18.4	15.6	15.9	16.7	17.0	18.4
	6H	15.7	15.9	16.8	17.0	18.4	15.7	15.9	16.8	17.0	18.5
	8H	15.7	15.9	16.8	17.0	18.5	15.7	15.9	16.8	17.0	18.5

Maximum UGR = 18.5

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## POLAR GRAPH



Maximum Candela = 4540.182 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.)