



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 and #13257153.20

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, wide distrib anodized aluminum reflector trim w/clear cover glass up,

[MORE] medium 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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2396
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
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	2788	2429	2799
55	1269	1062	1290
65	684	461	679
75	236	156	231
85	36	26	38

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OW-CSU-RM-WHD-WM_IES

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	3205.404	3205.404	3205.404	3205.404	3205.404	3205.404	3205.404	3205.404	3205.404
2.5	3161.826	3148.914	3153.756	3164.247	3169.896	3164.247	3153.756	3148.914	3161.826
5.0	3027.864	3015.759	3022.215	3030.285	3031.899	3030.285	3022.215	3015.759	3027.864
7.5	2825.307	2819.658	2826.921	2826.921	2825.307	2826.921	2826.921	2819.658	2825.307
10.0	2533.173	2533.980	2547.699	2538.822	2532.366	2538.822	2547.699	2533.980	2533.173
12.5	2119.182	2125.638	2145.813	2138.550	2124.831	2138.550	2145.813	2125.638	2119.182
15.0	1612.386	1632.561	1660.806	1655.157	1633.368	1655.157	1660.806	1632.561	1612.386
17.5	1128.993	1166.922	1204.851	1194.360	1163.694	1194.360	1204.851	1166.922	1128.993
20.0	776.011	819.105	865.104	843.315	811.035	843.315	865.104	819.105	776.011
22.5	572.566	606.218	653.186	620.260	592.499	620.260	653.186	606.218	572.566
25.0	457.165	484.039	525.841	488.961	461.443	488.961	525.841	484.039	457.165
27.5	374.125	401.725	441.913	402.532	372.995	402.532	441.913	401.725	374.125
30.0	301.737	331.354	374.367	331.919	303.593	331.919	374.367	331.354	301.737
32.5	243.149	268.892	312.955	271.071	246.619	271.071	312.955	268.892	243.149
35.0	197.473	218.616	257.756	221.925	202.476	221.925	257.756	218.616	197.473
37.5	168.824	180.768	210.708	184.884	170.761	184.884	210.708	180.768	168.824
40.0	146.632	154.460	173.828	156.477	146.955	156.477	173.828	154.460	146.632
42.5	125.973	133.558	145.583	134.204	126.134	134.204	145.583	133.558	125.973
45.0	106.847	114.917	124.278	115.078	107.250	115.078	124.278	114.917	106.847
47.5	89.658	97.566	105.556	97.808	90.142	97.808	105.556	97.566	89.658
50.0	74.567	81.830	88.366	82.233	75.374	82.233	88.366	81.830	74.567
52.5	62.381	68.353	73.195	68.918	63.349	68.918	73.195	68.353	62.381
55.0	53.101	57.136	60.283	57.862	53.988	57.862	60.283	57.136	53.101
57.5	46.080	48.339	49.711	48.823	46.725	48.823	49.711	48.339	46.080
60.0	40.592	41.318	41.076	41.560	40.592	41.560	41.076	41.318	40.592
62.5	35.347	35.347	33.975	35.266	35.185	35.266	33.975	35.347	35.347
65.0	30.182	29.778	27.922	29.617	29.940	29.617	27.922	29.778	30.182
67.5	25.098	24.613	22.677	24.371	24.856	24.371	22.677	24.613	25.098
70.0	20.175	19.691	17.996	19.449	19.933	19.449	17.996	19.691	20.175
72.5	15.414	15.010	13.719	14.768	15.252	14.768	13.719	15.010	15.414
75.0	10.652	10.652	9.765	10.330	10.410	10.330	9.765	10.652	10.652
77.5	5.084	6.295	6.456	6.133	5.972	6.133	6.456	6.295	5.084
80.0	3.712	3.793	4.035	3.874	3.874	3.874	4.035	3.793	3.712
82.5	2.582	2.663	2.663	2.663	2.663	2.663	2.663	2.663	2.582
85.0	1.614	1.695	1.614	1.614	1.695	1.614	1.614	1.695	1.614
87.5	0.726	0.726	0.726	0.807	0.807	0.807	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	0.738	0.984	1.599	3.014	2.891	3.014	1.599	0.984	0.738
95.0	0.861	1.169	1.722	3.075	3.014	3.075	1.722	1.169	0.861
97.5	0.984	1.292	1.907	3.198	3.075	3.198	1.907	1.292	0.984
100.0	1.107	1.476	2.091	3.321	3.198	3.321	2.091	1.476	1.107
102.5	1.230	1.599	2.276	3.444	3.383	3.444	2.276	1.599	1.230
105.0	1.415	1.845	2.460	3.629	3.506	3.629	2.460	1.845	1.415
107.5	1.661	2.091	2.706	3.813	3.752	3.813	2.706	2.091	1.661
110.0	1.907	2.399	3.137	3.998	3.998	3.998	3.137	2.399	1.907
112.5	2.276	2.768	4.305	4.305	4.305	4.305	4.305	2.768	2.276
115.0	2.706	4.428	7.749	7.073	4.797	7.073	7.749	4.428	2.706
117.5	4.367	8.733	14.760	12.792	10.025	12.792	14.760	8.733	4.367
120.0	12.485	18.512	25.092	22.632	16.913	22.632	25.092	18.512	12.485
122.5	23.309	32.718	38.807	35.363	29.520	35.363	38.807	32.718	23.309
125.0	40.467	50.123	53.874	50.922	44.711	50.922	53.874	50.123	40.467
127.5	61.070	68.634	69.680	68.019	63.222	68.019	69.680	68.634	61.070
130.0	82.103	86.838	86.838	86.100	83.763	86.100	86.838	86.838	82.103
132.5	105.596	106.149	105.842	105.719	107.195	105.719	105.842	106.149	105.596

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OW-CSU-RM-WHD-WM_.IES****CANDELA TABULATION - (Cont.)**

135.0	130.442	127.367	127.244	127.490	132.164	127.490	127.244	127.367	130.442
137.5	157.256	152.090	153.012	152.828	159.224	152.828	153.012	152.090	157.256
140.0	187.637	183.024	187.821	185.115	190.220	185.115	187.821	183.024	187.637
142.5	225.705	223.553	235.545	228.350	230.810	228.350	235.545	223.553	225.705
145.0	274.844	280.133	299.013	284.930	282.654	284.930	299.013	280.133	274.844
147.5	342.555	356.393	377.180	359.960	351.965	359.960	377.180	356.393	342.555
150.0	434.805	452.025	468.630	453.378	441.140	453.378	468.630	452.025	434.805
152.5	554.792	563.463	568.937	555.468	545.628	555.468	568.937	563.463	554.792
155.0	685.725	686.340	677.730	664.815	655.590	664.815	677.730	686.340	685.725
157.5	816.105	814.875	797.040	784.125	775.515	784.125	797.040	814.875	816.105
160.0	940.950	939.105	923.115	910.815	902.820	910.815	923.115	939.105	940.950
162.5	1064.565	1060.260	1046.115	1033.200	1024.590	1033.200	1046.115	1060.260	1064.565
165.0	1177.725	1178.340	1167.885	1153.740	1146.360	1153.740	1167.885	1178.340	1177.725
167.5	1281.045	1281.045	1274.895	1265.055	1258.905	1265.055	1274.895	1281.045	1281.045
170.0	1381.905	1378.830	1374.525	1368.375	1364.685	1368.375	1374.525	1378.830	1381.905
172.5	1462.470	1458.780	1456.320	1452.630	1450.785	1452.630	1456.320	1458.780	1462.470
175.0	1521.510	1518.435	1515.975	1514.130	1514.130	1514.130	1515.975	1518.435	1521.510
177.5	1555.950	1553.490	1551.030	1552.260	1551.645	1552.260	1551.030	1553.490	1555.950
180.0	1563.000	1563.000	1563.000	1563.000	1563.000	1563.000	1563.000	1563.000	1563.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OW-CSU-RM-WHD-WM_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	718.17	N.A.	30.00
0-30	954.02	N.A.	39.80
0-40	1098.23	N.A.	45.80
0-60	1240.43	N.A.	51.80
0-80	1280.98	N.A.	53.50
0-90	1282.88	N.A.	53.60
10-90	1009.32	N.A.	42.10
20-40	380.05	N.A.	15.90
20-50	469.82	N.A.	19.60
40-70	171.52	N.A.	7.20
60-80	40.55	N.A.	1.70
70-80	11.23	N.A.	0.50
80-90	1.90	N.A.	0.10
90-110	4.71	N.A.	0.20
90-120	12.54	N.A.	0.50
90-130	57.45	N.A.	2.40
90-150	342.26	N.A.	14.30
90-180	1112.7	N.A.	46.40
110-180	1107.99	N.A.	46.30
0-180	2395.58	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	273.56
10-20	444.61
20-30	235.84
30-40	144.21
40-50	89.77
50-60	52.44
60-70	29.31
70-80	11.23
80-90	1.90
90-100	1.93
100-110	2.78
110-120	7.83
120-130	44.91
130-140	100.48
140-150	184.34
150-160	308.42
160-170	321.81
170-180	140.19

IES INDOOR REPORT

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

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	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	95	92	94	91	88	86	78	77	75	67	66	65	56	56	55	50
2	94	89	84	80	88	83	79	76	72	69	67	62	60	59	53	52	51	47
3	88	81	75	71	82	76	71	67	67	63	60	58	56	54	50	49	47	44
4	83	75	68	64	77	70	65	61	62	58	55	55	52	50	48	46	44	41
5	78	69	62	58	73	65	60	55	58	54	51	52	48	46	45	43	42	39
6	74	64	58	53	69	61	55	51	54	50	47	49	46	43	43	41	39	37
7	70	60	53	49	65	57	51	47	51	47	44	46	43	41	41	39	37	35
8	66	56	50	45	62	53	48	44	48	44	41	44	41	38	40	37	35	33
9	63	53	47	43	59	50	45	41	46	42	39	42	39	36	38	36	34	32
10	60	50	44	40	56	48	42	39	44	40	37	40	37	34	36	34	32	31

IES INDOOR REPORT

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

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	3.4	4.1	4.4	5.1	6.3	3.5	4.2	4.5	5.2	6.4
	3H	4.2	4.8	5.1	5.7	7.0	4.2	4.8	5.2	5.8	7.0
	4H	4.2	4.8	5.2	5.8	7.1	4.3	4.9	5.3	5.8	7.1
	6H	4.2	4.7	5.2	5.7	7.0	4.2	4.8	5.2	5.7	7.0
	8H	4.1	4.7	5.1	5.6	6.9	4.2	4.7	5.2	5.7	7.0
	12H	4.1	4.6	5.1	5.5	6.8	4.1	4.6	5.1	5.6	6.9

UGR Viewed Endwise

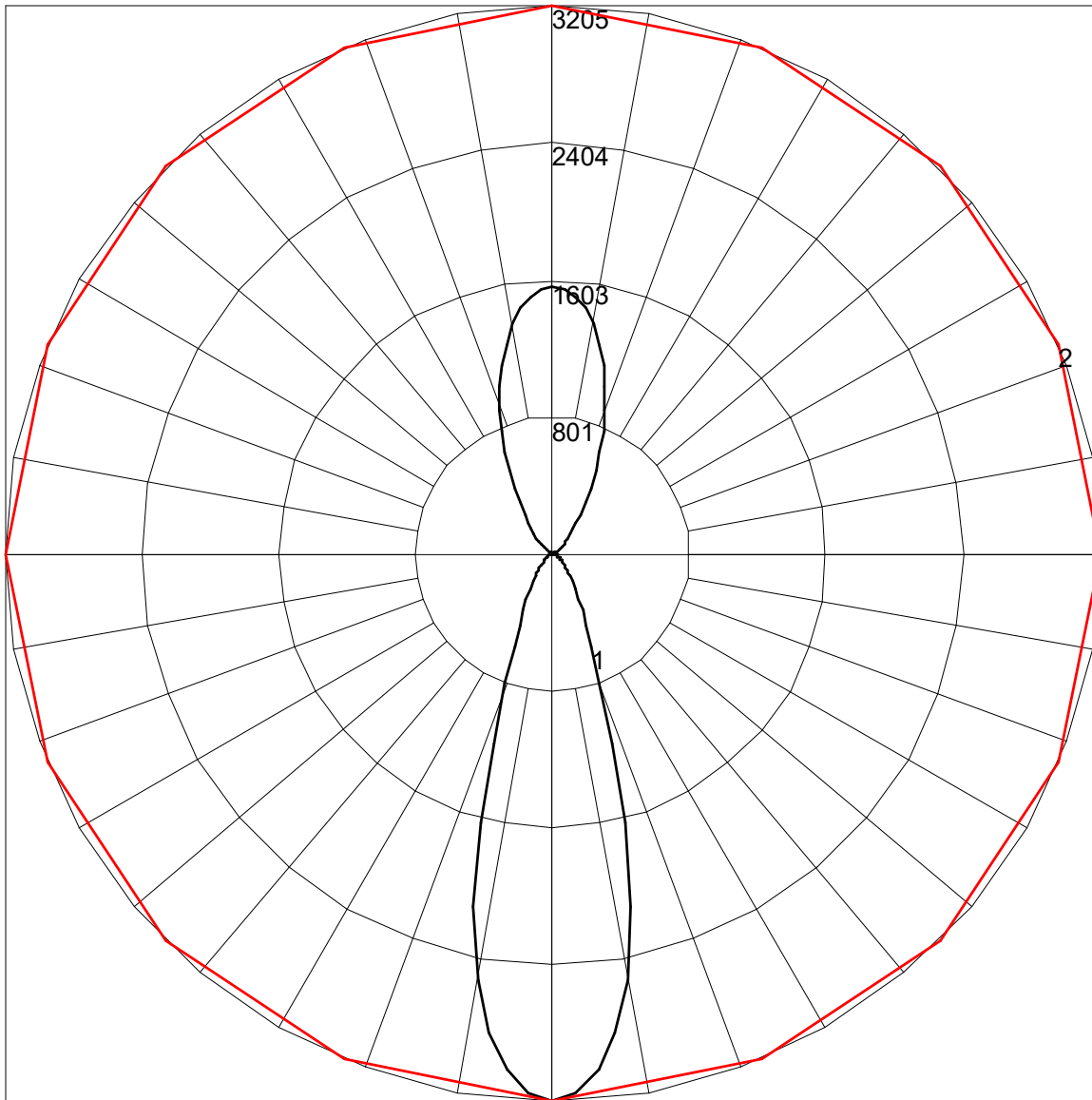
4H	2H	3.5	4.1	4.5	5.1	6.3	3.6	4.2	4.6	5.1	6.4
	3H	4.3	4.8	5.3	5.8	7.1	4.4	4.9	5.4	5.9	7.1
	4H	4.5	4.9	5.5	5.9	7.2	4.5	4.9	5.5	5.9	7.2
	6H	4.4	4.8	5.4	5.8	7.1	4.4	4.8	5.5	5.8	7.1
	8H	4.4	4.7	5.4	5.7	7.1	4.4	4.8	5.4	5.8	7.1
	12H	4.3	4.6	5.3	5.7	7.0	4.3	4.7	5.4	5.7	7.0
8H	4H	4.4	4.7	5.4	5.7	7.1	4.4	4.8	5.4	5.8	7.1
	6H	4.3	4.6	5.4	5.7	7.0	4.4	4.7	5.4	5.7	7.0
	8H	4.3	4.6	5.4	5.6	6.9	4.3	4.6	5.4	5.6	7.0
	12H	4.3	4.5	5.3	5.5	6.9	4.3	4.5	5.3	5.5	6.9
12H	4H	4.3	4.6	5.3	5.7	7.0	4.3	4.7	5.4	5.7	7.0
	6H	4.3	4.5	5.3	5.6	6.9	4.3	4.6	5.4	5.6	6.9
	8H	4.3	4.5	5.3	5.5	6.9	4.3	4.5	5.3	5.5	6.9

Maximum UGR = 7.2

IES INDOOR REPORT

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

POLAR GRAPH



Maximum Candela = 3205.404 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.)