



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.18 and #13257153.23

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib anodized aluminum reflector trim w/clear cover glass 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	2360
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
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-OM-CSU-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	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
95.0	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
97.5	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
100.0	0.199	0.199	0.199	0.199	0.299	0.199	0.199	0.199	0.199
102.5	0.299	0.299	0.299	0.299	0.398	0.299	0.299	0.299	0.299
105.0	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498
107.5	0.597	0.597	0.597	0.597	0.697	0.597	0.597	0.597	0.597
110.0	0.896	0.796	1.095	0.896	0.896	0.896	1.095	0.796	0.896
112.5	1.194	1.095	3.682	1.194	1.294	1.194	3.682	1.095	1.194
115.0	1.592	4.975	11.642	5.373	1.692	5.373	11.642	4.975	1.592
117.5	11.144	19.701	23.681	20.000	10.348	20.000	23.681	19.701	11.144
120.0	29.950	37.014	37.213	38.407	30.149	38.407	37.213	37.014	29.950
122.5	49.153	53.233	51.740	55.720	51.044	55.720	51.740	53.233	49.153
125.0	68.854	69.750	66.964	73.232	71.740	73.232	66.964	69.750	68.854
127.5	90.147	86.963	82.784	91.341	93.829	91.341	82.784	86.963	90.147
130.0	111.938	105.868	99.600	110.744	116.813	110.744	99.600	105.868	111.938
132.5	134.126	126.863	118.803	132.236	140.594	132.236	118.803	126.863	134.126

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135.0	157.509	150.444	141.887	156.016	165.170	156.016	141.887	150.444	157.509
137.5	183.478	178.006	171.837	183.777	191.836	183.777	171.837	178.006	183.478
140.0	214.821	212.134	211.836	217.408	222.880	217.408	211.836	212.134	214.821
142.5	253.228	254.919	263.476	258.999	260.193	258.999	263.476	254.919	253.228
145.0	300.888	308.550	324.967	310.938	306.560	310.938	324.967	308.550	300.888
147.5	362.280	376.409	395.115	377.006	366.558	377.006	395.115	376.409	362.280
150.0	441.084	459.491	473.322	458.098	443.074	458.098	473.322	459.491	441.084
152.5	536.504	552.225	557.897	549.539	534.614	549.539	557.897	552.225	536.504
155.0	638.094	647.646	649.636	645.059	633.915	645.059	649.636	647.646	638.094
157.5	735.206	742.867	745.255	740.877	731.027	740.877	745.255	742.867	735.206
160.0	831.223	839.084	843.263	838.288	829.532	838.288	843.263	839.084	831.223
162.5	930.126	937.489	943.260	936.793	930.226	936.793	943.260	937.489	930.126
165.0	1028.830	1033.805	1040.770	1033.805	1027.835	1033.805	1040.770	1033.805	1028.830
167.5	1122.360	1125.345	1129.325	1124.350	1121.365	1124.350	1129.325	1125.345	1122.360
170.0	1206.935	1207.930	1206.935	1206.935	1205.940	1206.935	1206.935	1207.930	1206.935
172.5	1276.585	1276.585	1274.595	1274.595	1275.590	1274.595	1274.595	1276.585	1276.585
175.0	1330.315	1331.310	1329.320	1329.320	1330.315	1329.320	1329.320	1331.310	1330.315
177.5	1368.125	1368.125	1365.140	1366.135	1367.130	1366.135	1365.140	1368.125	1368.125
180.0	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000

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Zone	Lumens	%Lamp	%Fixt
0-20	701.85	N.A.	29.70
0-30	923.67	N.A.	39.10
0-40	1073.85	N.A.	45.50
0-60	1221.54	N.A.	51.80
0-80	1262.32	N.A.	53.50
0-90	1264.23	N.A.	53.60
10-90	934.07	N.A.	39.60
20-40	372.00	N.A.	15.80
20-50	466.64	N.A.	19.80
40-70	177.31	N.A.	7.50
60-80	40.78	N.A.	1.70
70-80	11.17	N.A.	0.50
80-90	1.90	N.A.	0.10
90-110	0.66	N.A.	0.00
90-120	11.49	N.A.	0.50
90-130	74.28	N.A.	3.10
90-150	392.69	N.A.	16.60
90-180	1095.83	N.A.	46.40
110-180	1095.17	N.A.	46.40
0-180	2360.06	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	0.14
100-110	0.52
110-120	10.83
120-130	62.79
130-140	119.48
140-150	198.92
150-160	293.61
160-170	286.51
170-180	123.03

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

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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	14.6	15.3	15.6	16.3	17.5	14.7	15.4	15.7	16.4	17.6
	3H	15.7	16.3	16.6	17.3	18.5	15.7	16.3	16.7	17.3	18.6
	4H	15.9	16.5	16.9	17.4	18.7	15.9	16.5	16.9	17.5	18.7
	6H	15.9	16.4	16.9	17.4	18.7	15.9	16.4	16.9	17.4	18.7
	8H	15.8	16.3	16.8	17.3	18.6	15.9	16.4	16.9	17.4	18.6
	12H	15.8	16.3	16.8	17.3	18.6	15.8	16.3	16.8	17.3	18.6

UGR Viewed Endwise

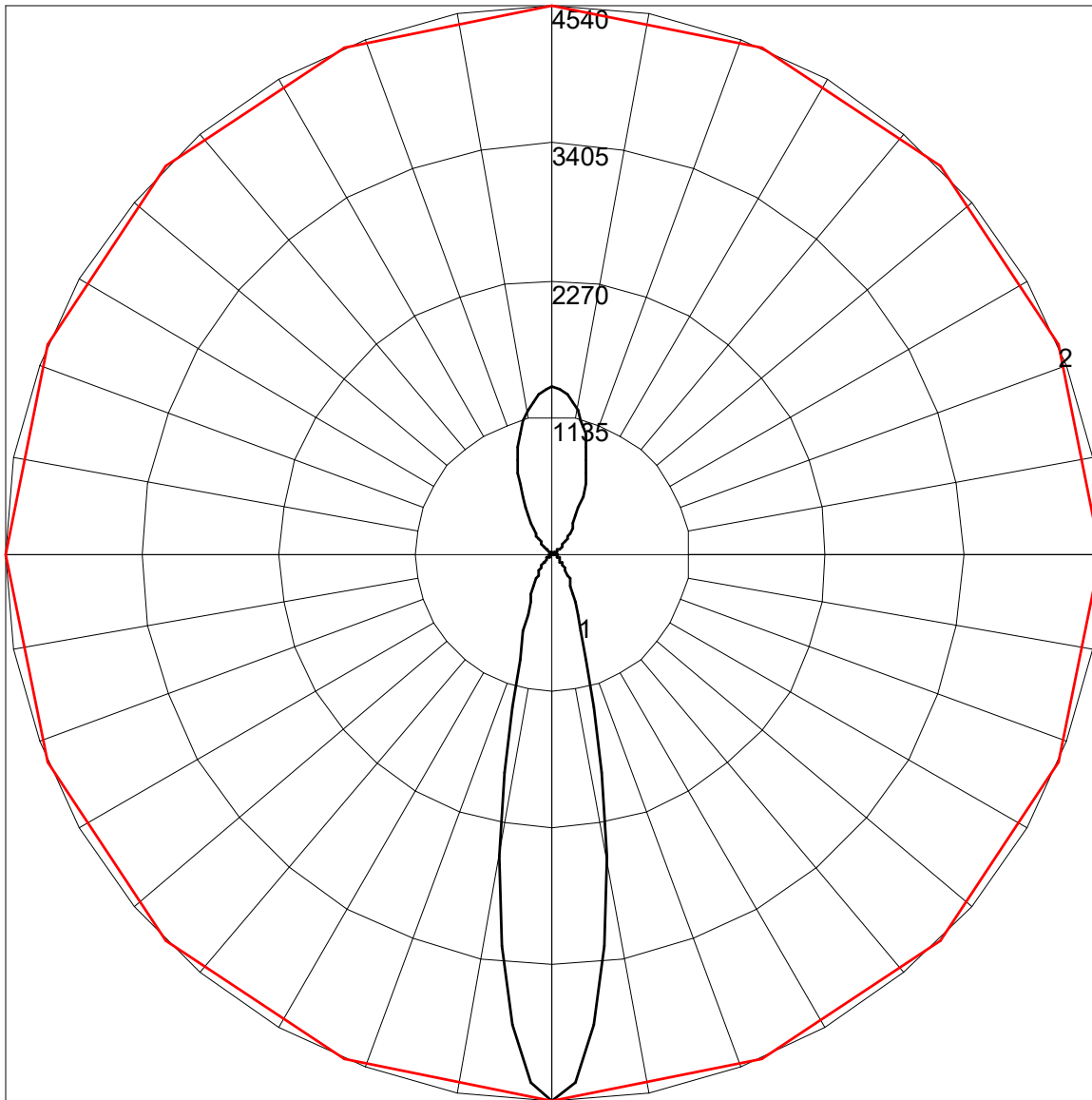
4H	2H	14.8	15.4	15.8	16.4	17.7	14.9	15.5	15.9	16.5	17.8
	3H	16.0	16.5	17.0	17.5	18.8	16.1	16.6	17.1	17.6	18.8
	4H	16.3	16.8	17.3	17.8	19.1	16.3	16.8	17.3	17.8	19.1
	6H	16.3	16.7	17.4	17.7	19.0	16.4	16.8	17.4	17.8	19.1
	8H	16.3	16.7	17.4	17.7	19.0	16.4	16.7	17.4	17.7	19.0
	12H	16.3	16.6	17.3	17.6	19.0	16.3	16.6	17.3	17.7	19.0
8H	4H	16.3	16.7	17.3	17.7	19.0	16.3	16.7	17.3	17.7	19.0
	6H	16.4	16.7	17.4	17.7	19.0	16.4	16.7	17.4	17.7	19.0
	8H	16.4	16.6	17.4	17.7	19.0	16.4	16.7	17.5	17.7	19.0
	12H	16.4	16.6	17.4	17.6	19.0	16.4	16.6	17.4	17.7	19.0
12H	4H	16.2	16.6	17.3	17.6	18.9	16.3	16.6	17.3	17.6	18.9
	6H	16.3	16.6	17.4	17.6	19.0	16.4	16.6	17.4	17.6	19.0
	8H	16.3	16.6	17.4	17.6	19.0	16.4	16.6	17.4	17.6	19.0

Maximum UGR = 19.1

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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.)