



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OM-CSU-RS-WHD-WM\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.18 and #13257153.26

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib anodized aluminum reflector trim w/clear cover glass up,  
[MORE] narrow spot 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	2568
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	34.2861
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-RS-WHD-WM\_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	28122	34098	27770
55	17334	19501	16901
65	12351	12351	12939
75	6723	7683	7683
85	2852	5704	5704

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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>
<b>0.0</b>	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000
<b>2.5</b>	13020.000	13030.000	13030.000	13040.000	13020.000	13040.000	13030.000	13030.000	13020.000
<b>5.0</b>	9911.000	9920.000	9793.000	9664.000	9611.000	9664.000	9793.000	9920.000	9911.000
<b>7.5</b>	6389.000	6394.000	6164.000	5929.000	5852.000	5929.000	6164.000	6394.000	6389.000
<b>10.0</b>	3626.000	3621.000	3384.000	3167.000	3094.000	3167.000	3384.000	3621.000	3626.000
<b>12.5</b>	1910.000	1917.000	1762.000	1630.000	1572.000	1630.000	1762.000	1917.000	1910.000
<b>15.0</b>	1064.000	1070.000	1003.000	929.000	894.000	929.000	1003.000	1070.000	1064.000
<b>17.5</b>	682.000	693.000	671.000	633.000	609.000	633.000	671.000	693.000	682.000
<b>20.0</b>	500.000	518.000	522.000	492.000	468.000	492.000	522.000	518.000	500.000
<b>22.5</b>	398.000	417.000	433.000	403.000	380.000	403.000	433.000	417.000	398.000
<b>25.0</b>	324.000	348.000	368.000	338.000	316.000	338.000	368.000	348.000	324.000
<b>27.5</b>	271.000	291.000	316.000	284.000	263.000	284.000	316.000	291.000	271.000
<b>30.0</b>	221.000	244.000	273.000	236.000	213.000	236.000	273.000	244.000	221.000
<b>32.5</b>	183.000	201.000	234.000	194.000	176.000	194.000	234.000	201.000	183.000
<b>35.0</b>	153.000	168.000	197.000	161.000	147.000	161.000	197.000	168.000	153.000
<b>37.5</b>	131.000	142.000	164.000	137.000	130.000	137.000	164.000	142.000	131.000
<b>40.0</b>	113.000	121.000	137.000	119.000	112.000	119.000	137.000	121.000	113.000
<b>42.5</b>	95.000	104.000	115.000	102.000	94.000	102.000	115.000	104.000	95.000
<b>45.0</b>	80.000	88.000	97.000	87.000	79.000	87.000	97.000	88.000	80.000
<b>47.5</b>	66.000	73.000	80.000	72.000	65.000	72.000	80.000	73.000	66.000
<b>50.0</b>	55.000	61.000	67.000	60.000	54.000	60.000	67.000	61.000	55.000
<b>52.5</b>	46.000	51.000	55.000	50.000	45.000	50.000	55.000	51.000	46.000
<b>55.0</b>	40.000	43.000	45.000	42.000	39.000	42.000	45.000	43.000	40.000
<b>57.5</b>	34.000	36.000	36.000	35.000	34.000	35.000	36.000	36.000	34.000
<b>60.0</b>	30.000	31.000	30.000	30.000	30.000	30.000	30.000	31.000	30.000
<b>62.5</b>	25.000	26.000	25.000	26.000	26.000	26.000	25.000	26.000	25.000
<b>65.0</b>	21.000	22.000	21.000	22.000	22.000	22.000	21.000	22.000	21.000
<b>67.5</b>	17.000	18.000	17.000	18.000	18.000	18.000	17.000	18.000	17.000
<b>70.0</b>	14.000	14.000	13.000	15.000	15.000	15.000	13.000	14.000	14.000
<b>72.5</b>	11.000	11.000	10.000	11.000	11.000	11.000	10.000	11.000	11.000
<b>75.0</b>	7.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000	7.000
<b>77.5</b>	4.000	4.000	5.000	5.000	4.000	5.000	5.000	4.000	4.000
<b>80.0</b>	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
<b>82.5</b>	2.000	2.000	2.000	2.000	3.000	2.000	2.000	2.000	2.000
<b>85.0</b>	1.000	1.000	2.000	2.000	2.000	2.000	2.000	1.000	1.000
<b>87.5</b>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>92.5</b>	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
<b>95.0</b>	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
<b>97.5</b>	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
<b>100.0</b>	0.199	0.199	0.199	0.199	0.299	0.199	0.199	0.199	0.199
<b>102.5</b>	0.299	0.299	0.299	0.299	0.398	0.299	0.299	0.299	0.299
<b>105.0</b>	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498
<b>107.5</b>	0.597	0.597	0.597	0.597	0.697	0.597	0.597	0.597	0.597
<b>110.0</b>	0.896	0.796	1.095	0.896	0.896	0.896	1.095	0.796	0.896
<b>112.5</b>	1.194	1.095	3.682	1.194	1.294	1.194	3.682	1.095	1.194
<b>115.0</b>	1.592	4.975	11.642	5.373	1.692	5.373	11.642	4.975	1.592
<b>117.5</b>	11.144	19.701	23.681	20.000	10.348	20.000	23.681	19.701	11.144
<b>120.0</b>	29.950	37.014	37.213	38.407	30.149	38.407	37.213	37.014	29.950
<b>122.5</b>	49.153	53.233	51.740	55.720	51.044	55.720	51.740	53.233	49.153
<b>125.0</b>	68.854	69.750	66.964	73.232	71.740	73.232	66.964	69.750	68.854
<b>127.5</b>	90.147	86.963	82.784	91.341	93.829	91.341	82.784	86.963	90.147
<b>130.0</b>	111.938	105.868	99.600	110.744	116.813	110.744	99.600	105.868	111.938
<b>132.5</b>	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	1065.27	N.A.	41.50
0-30	1225.77	N.A.	47.70
0-40	1333.77	N.A.	51.90
0-60	1440.65	N.A.	56.10
0-80	1470.49	N.A.	57.30
0-90	1472.19	N.A.	57.30
10-90	749.18	N.A.	29.20
20-40	268.50	N.A.	10.50
20-50	336.74	N.A.	13.10
40-70	128.39	N.A.	5.00
60-80	29.84	N.A.	1.20
70-80	8.34	N.A.	0.30
80-90	1.70	N.A.	0.10
90-110	0.66	N.A.	0.00
90-120	11.49	N.A.	0.40
90-130	74.28	N.A.	2.90
90-150	392.69	N.A.	15.30
90-180	1095.83	N.A.	42.70
110-180	1095.17	N.A.	42.60
0-180	2568.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	723.01
10-20	342.26
20-30	160.50
30-40	107.99
40-50	68.25
50-60	38.64
60-70	21.50
70-80	8.34
80-90	1.70
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	109	109	109	109	101	101	101	101	87	87	87	75	75	75	63	63	63	57
1	103	100	97	95	96	93	91	89	82	80	79	71	70	69	61	60	60	55
2	97	92	88	84	91	86	83	80	76	74	72	67	65	64	58	57	57	53
3	92	85	80	76	86	81	76	73	72	69	66	64	62	60	56	55	54	51
4	87	79	74	70	82	76	71	67	68	65	62	61	59	57	55	53	52	49
5	83	75	69	65	78	71	66	63	65	61	58	59	56	54	53	51	50	47
6	79	71	65	61	75	67	63	59	62	58	55	56	54	52	51	49	48	46
7	76	67	61	57	72	64	59	56	59	55	53	54	52	50	50	48	47	45
8	73	64	58	55	69	61	57	53	57	53	51	53	50	48	49	47	45	43
9	70	61	56	52	67	59	54	51	55	51	49	51	48	46	47	46	44	42
10	67	59	54	50	64	57	52	49	53	50	47	50	47	45	46	44	43	42

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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	12.3	13.0	13.3	14.0	15.1	12.2	12.9	13.1	13.8	15.0
	3H	13.3	13.9	14.2	14.8	16.1	13.3	13.9	14.2	14.8	16.0
	4H	13.5	14.1	14.5	15.0	16.2	13.5	14.1	14.5	15.0	16.2
	6H	13.5	14.0	14.5	15.0	16.2	13.5	14.0	14.5	15.0	16.2
	8H	13.5	14.0	14.4	14.9	16.1	13.5	14.0	14.5	15.0	16.2
	12H	13.4	13.9	14.4	14.8	16.1	13.5	14.0	14.5	14.9	16.2

### UGR Viewed Endwise

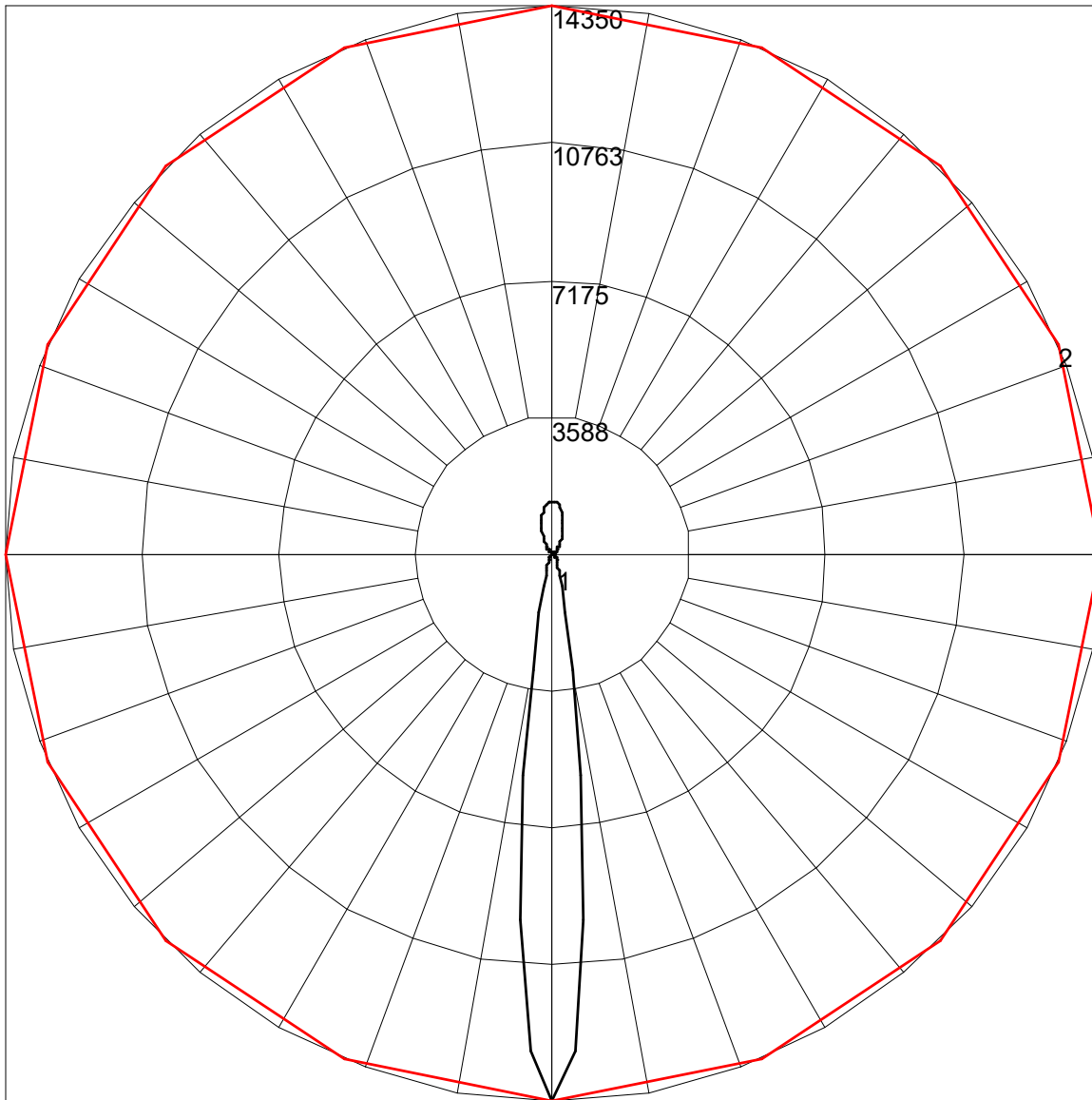
4H	2H	12.6	13.2	13.6	14.1	15.3	12.4	13.0	13.4	14.0	15.2
	3H	13.7	14.2	14.6	15.1	16.4	13.7	14.2	14.6	15.1	16.4
	4H	14.0	14.4	14.9	15.4	16.6	14.0	14.4	15.0	15.4	16.6
	6H	14.0	14.4	15.0	15.3	16.6	14.0	14.4	15.0	15.4	16.7
	8H	14.0	14.3	15.0	15.3	16.6	14.1	14.4	15.0	15.4	16.6
	12H	13.9	14.2	14.9	15.2	16.5	14.1	14.4	15.1	15.4	16.6
8H	4H	14.0	14.3	15.0	15.3	16.6	14.0	14.3	15.0	15.3	16.6
	6H	14.0	14.3	15.1	15.3	16.6	14.1	14.4	15.1	15.4	16.7
	8H	14.1	14.3	15.1	15.3	16.6	14.1	14.4	15.2	15.4	16.7
	12H	14.0	14.2	15.1	15.2	16.6	14.2	14.4	15.2	15.4	16.7
12H	4H	13.9	14.2	14.9	15.2	16.5	13.9	14.2	14.9	15.2	16.5
	6H	14.0	14.2	15.0	15.2	16.5	14.0	14.3	15.1	15.3	16.6
	8H	14.0	14.2	15.0	15.2	16.6	14.1	14.3	15.1	15.3	16.6

Maximum UGR = 16.7

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## POLAR GRAPH



Maximum Candela = 14350 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.)