



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 and #13257153.23

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, wide 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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2377
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 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	2877	2605	2900
55	1267	1077	1294
65	691	461	680
75	233	156	222
85	36	26	36

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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	0.738	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

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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

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Zone	Lumens	%Lamp	%Fixt
0-20	701.85	N.A.	29.50
0-30	923.67	N.A.	38.90
0-40	1073.85	N.A.	45.20
0-60	1221.54	N.A.	51.40
0-80	1262.32	N.A.	53.10
0-90	1264.23	N.A.	53.20
10-90	934.07	N.A.	39.30
20-40	372.00	N.A.	15.70
20-50	466.64	N.A.	19.60
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	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.	14.40
90-180	1112.7	N.A.	46.80
110-180	1107.99	N.A.	46.60
0-180	2376.92	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	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

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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	53
1	101	98	95	92	94	91	88	86	78	77	75	67	66	65	56	55	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	63	58	73	65	60	55	58	54	51	52	49	46	45	43	42	39
6	74	64	58	53	69	61	55	51	55	50	47	49	46	43	43	41	39	37
7	70	60	54	49	65	57	51	47	51	47	44	46	43	41	41	39	37	35
8	66	56	50	46	62	54	48	44	49	44	41	44	41	38	40	37	36	34
9	63	53	47	43	59	51	45	42	46	42	39	42	39	37	38	36	34	32
10	60	50	44	40	57	48	43	39	44	40	37	40	37	35	37	34	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	3.5	4.2	4.5	5.2	6.4	3.6	4.3	4.6	5.3	6.6
	3H	4.2	4.9	5.2	5.8	7.1	4.3	4.9	5.3	5.9	7.2
	4H	4.3	4.9	5.3	5.9	7.2	4.4	5.0	5.4	5.9	7.2
	6H	4.3	4.8	5.3	5.8	7.1	4.3	4.9	5.3	5.8	7.1
	8H	4.2	4.7	5.2	5.7	7.0	4.3	4.8	5.3	5.8	7.1
	12H	4.2	4.6	5.2	5.6	6.9	4.2	4.7	5.2	5.7	7.0

UGR Viewed Endwise

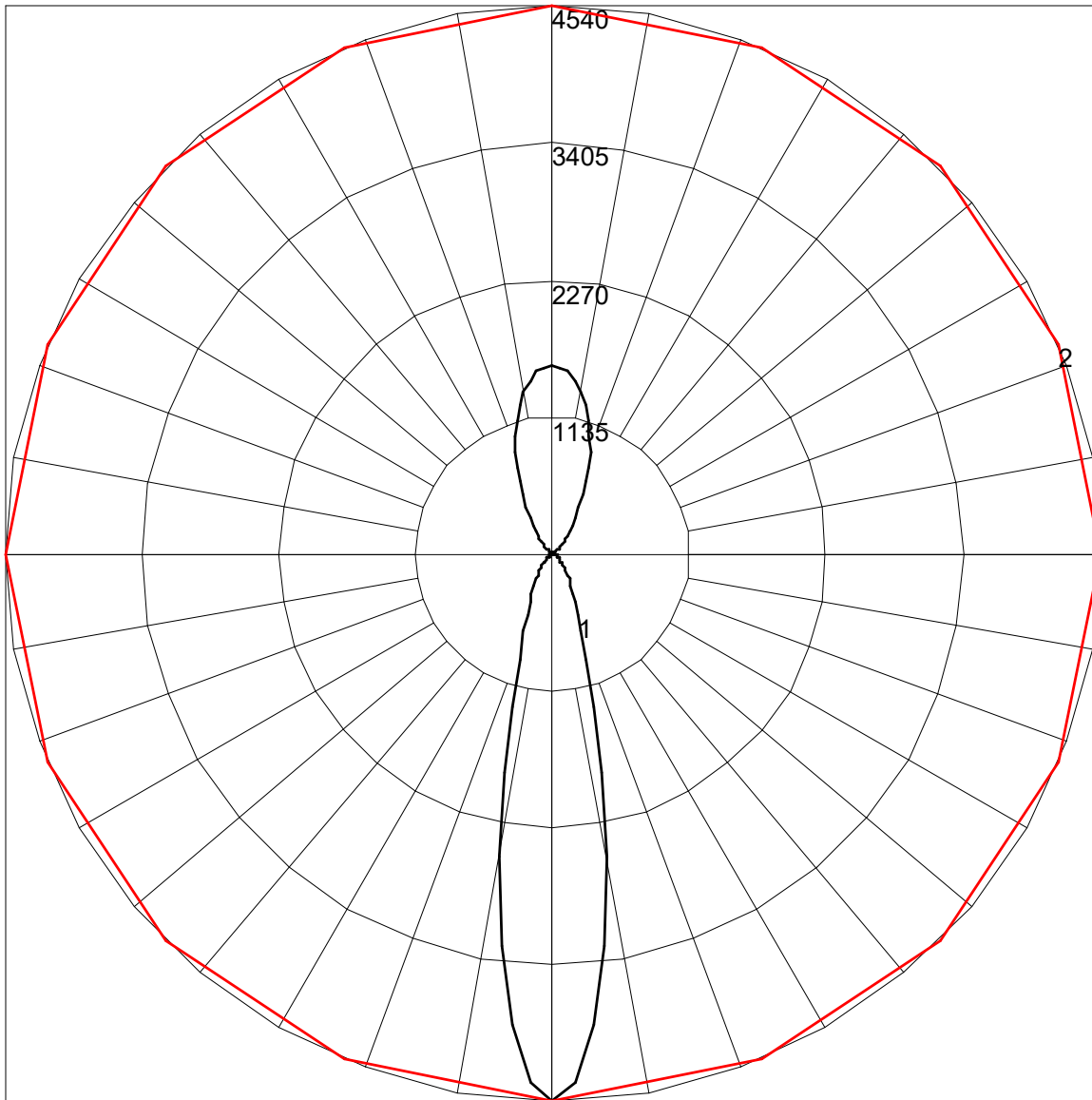
4H	2H	3.6	4.2	4.6	5.2	6.4	3.7	4.3	4.7	5.3	6.5
	3H	4.4	4.9	5.4	5.9	7.2	4.5	4.9	5.5	6.0	7.2
	4H	4.5	5.0	5.6	6.0	7.3	4.6	5.0	5.6	6.0	7.3
	6H	4.5	4.9	5.5	5.9	7.2	4.5	4.9	5.6	5.9	7.2
	8H	4.4	4.8	5.5	5.8	7.1	4.5	4.8	5.5	5.8	7.2
	12H	4.4	4.7	5.4	5.7	7.0	4.4	4.7	5.5	5.8	7.1
8H	4H	4.4	4.8	5.5	5.8	7.1	4.5	4.8	5.5	5.8	7.2
	6H	4.4	4.7	5.5	5.7	7.1	4.5	4.7	5.5	5.8	7.1
	8H	4.4	4.6	5.4	5.7	7.0	4.4	4.7	5.5	5.7	7.1
	12H	4.3	4.5	5.4	5.6	7.0	4.4	4.6	5.4	5.6	7.0
12H	4H	4.4	4.7	5.4	5.7	7.0	4.4	4.7	5.5	5.8	7.1
	6H	4.3	4.6	5.4	5.6	7.0	4.4	4.6	5.4	5.7	7.0
	8H	4.3	4.5	5.4	5.6	7.0	4.4	4.6	5.4	5.6	7.0

Maximum UGR = 7.3

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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.)