



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 and #13257153.23

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, wide 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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2739
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 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	0.737	1.474	2.272	3.868	3.868	3.868	2.272	1.474	0.737
95.0	2.395	3.193	3.868	5.526	5.649	5.526	3.868	3.193	2.395
97.5	5.465	5.833	6.263	7.982	8.166	7.982	6.263	5.833	5.465
100.0	8.596	9.087	9.456	11.236	11.482	11.236	9.456	9.087	8.596
102.5	12.280	12.894	13.078	14.982	15.289	14.982	13.078	12.894	12.280
105.0	16.210	16.885	17.008	19.157	19.280	19.157	17.008	16.885	16.210
107.5	20.323	21.183	21.367	23.639	23.578	23.639	21.367	21.183	20.323
110.0	24.683	25.727	25.911	28.305	28.244	28.305	25.911	25.727	24.683
112.5	29.349	30.516	30.639	33.340	33.156	33.340	30.639	30.516	29.349
115.0	34.016	35.612	35.796	38.375	37.945	38.375	35.796	35.612	34.016
117.5	38.436	40.524	40.892	43.410	42.612	43.410	40.892	40.524	38.436
120.0	43.041	45.313	45.866	48.015	46.971	48.015	45.866	45.313	43.041
122.5	47.217	49.980	50.716	52.190	50.655	52.190	50.716	49.980	47.217
125.0	50.716	54.155	55.444	56.120	53.971	56.120	55.444	54.155	50.716
127.5	54.400	58.698	60.847	60.356	57.777	60.356	58.698	54.400	54.400
130.0	58.944	64.654	67.479	65.944	62.382	65.944	64.654	58.944	58.944
132.5	65.821	72.820	76.382	73.496	69.382	73.496	72.820	65.821	65.821

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135.0	76.443	84.425	89.521	84.548	80.373	84.548	89.521	84.425	76.443
137.5	92.223	101.433	110.766	100.205	96.214	100.205	110.766	101.433	92.223
140.0	114.572	127.282	146.193	122.800	117.765	122.800	146.193	127.282	114.572
142.5	146.992	167.315	207.348	158.473	149.263	158.473	207.348	167.315	146.992
145.0	195.436	230.004	302.825	215.944	195.436	215.944	302.825	230.004	195.436
147.5	269.669	325.297	437.414	308.228	264.941	308.228	437.414	325.297	269.669
150.0	382.031	464.307	605.097	447.053	376.566	447.053	605.097	464.307	382.031
152.5	551.925	652.682	791.446	632.420	544.864	632.420	791.446	652.682	551.925
155.0	785.920	879.248	992.224	863.898	777.938	863.898	992.224	879.248	785.920
157.5	1072.658	1138.970	1212.036	1130.374	1059.150	1130.374	1212.036	1138.970	1072.658
160.0	1377.816	1410.358	1457.636	1417.112	1371.062	1417.112	1457.636	1410.358	1377.816
162.5	1649.204	1668.238	1692.798	1679.904	1655.958	1679.904	1692.798	1668.238	1649.204
165.0	1881.296	1888.050	1900.330	1896.032	1884.366	1896.032	1900.330	1888.050	1881.296
167.5	2064.882	2059.970	2071.022	2069.180	2064.268	2069.180	2071.022	2059.970	2064.882
170.0	2199.348	2193.208	2192.594	2190.138	2188.296	2190.138	2192.594	2193.208	2199.348
172.5	2276.712	2273.028	2269.344	2263.818	2261.976	2263.818	2269.344	2273.028	2276.712
175.0	2312.938	2310.482	2308.026	2306.184	2304.956	2306.184	2308.026	2310.482	2312.938
177.5	2313.552	2318.464	2320.306	2323.376	2324.604	2323.376	2320.306	2318.464	2313.552
180.0	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000

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Zone	Lumens	%Lamp	%Fixt
0-20	701.85	N.A.	25.60
0-30	923.67	N.A.	33.70
0-40	1073.85	N.A.	39.20
0-60	1221.54	N.A.	44.60
0-80	1262.32	N.A.	46.10
0-90	1264.23	N.A.	46.20
10-90	934.07	N.A.	34.10
20-40	372.00	N.A.	13.60
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	23.89	N.A.	0.90
90-120	59.88	N.A.	2.20
90-130	108.92	N.A.	4.00
90-150	336.45	N.A.	12.30
90-180	1474.45	N.A.	53.80
110-180	1450.57	N.A.	53.00
0-180	2738.68	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	4.99
100-110	18.90
110-120	35.99
120-130	49.04
130-140	68.05
140-150	159.48
150-160	405.66
160-170	515.63
170-180	216.70

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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	53	53	53	46
1	99	96	93	90	91	88	86	83	74	73	71	62	60	59	50	49	49	43
2	92	87	82	78	85	80	76	73	68	65	63	57	55	54	47	46	45	40
3	86	79	73	68	80	73	68	64	63	59	57	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	57	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	31
8	63	53	47	43	59	51	45	41	45	41	38	40	37	35	35	33	31	29
9	60	50	44	40	56	48	42	38	43	38	36	38	35	33	34	31	30	28
10	57	47	41	37	54	45	40	36	41	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	3.6	3.6	3.9	4.5	5.9	3.6	3.6	4.0	4.6	6.0
	3H	3.6	4.1	4.6	5.2	6.5	3.6	4.2	4.7	5.2	6.6
	4H	3.6	4.2	4.7	5.2	6.6	3.7	4.2	4.7	5.3	6.7
	6H	3.6	4.1	4.6	5.1	6.5	3.6	4.1	4.7	5.2	6.6
	8H	3.6	4.0	4.6	5.1	6.4	3.6	4.1	4.6	5.1	6.5
	12H	3.6	3.9	4.5	5.0	6.4	3.6	4.0	4.6	5.0	6.4

UGR Viewed Endwise

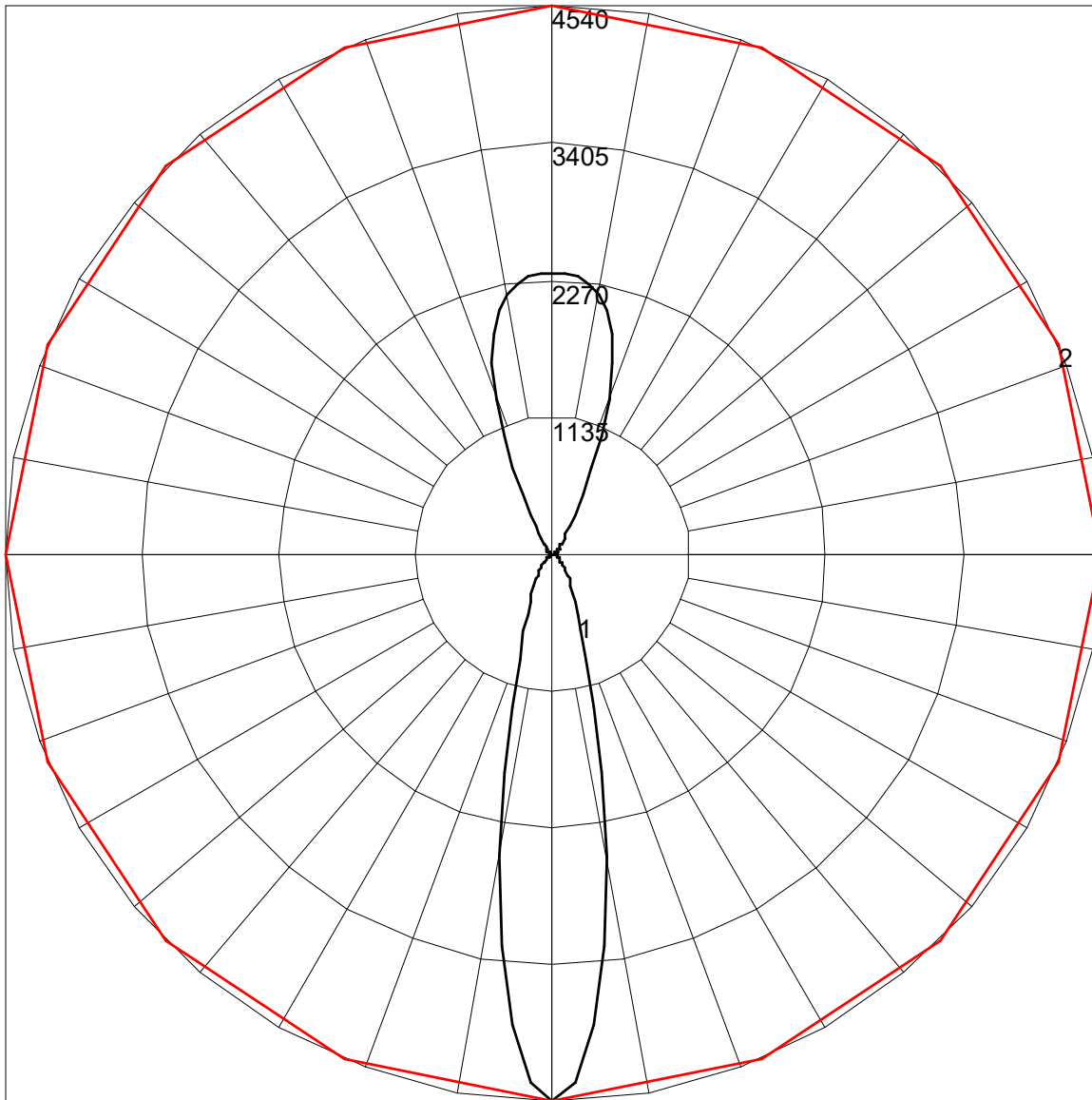
4H	2H	3.6	3.6	4.0	4.5	5.9	3.6	3.6	4.1	4.6	6.0
	3H	3.7	4.2	4.8	5.2	6.6	3.8	4.2	4.8	5.3	6.7
	4H	3.8	4.3	4.9	5.3	6.7	3.9	4.3	5.0	5.3	6.8
	6H	3.8	4.2	4.9	5.2	6.6	3.8	4.2	4.9	5.3	6.7
	8H	3.7	4.1	4.8	5.1	6.6	3.8	4.1	4.9	5.2	6.6
	12H	3.7	4.0	4.8	5.1	6.5	3.7	4.0	4.8	5.1	6.5
8H	4H	3.8	4.1	4.8	5.1	6.6	3.8	4.1	4.9	5.2	6.6
	6H	3.7	4.0	4.8	5.1	6.5	3.8	4.0	4.9	5.1	6.6
	8H	3.7	3.9	4.8	5.0	6.4	3.7	4.0	4.8	5.1	6.5
	12H	3.6	3.8	4.7	4.9	6.4	3.7	3.9	4.8	5.0	6.4
12H	4H	3.7	4.0	4.8	5.1	6.5	3.7	4.0	4.8	5.1	6.5
	6H	3.7	3.9	4.8	5.0	6.4	3.7	3.9	4.8	5.0	6.5
	8H	3.6	3.8	4.7	4.9	6.4	3.7	3.9	4.8	5.0	6.4

Maximum UGR = 6.8

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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.)