



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-WHU-ON-CSD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.19 and #13257153.21

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-L12-835U-L12-835D-xxx-DIM1-UNV-LM-WHU-ON-CSD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib white painted flush prismatic lens trim up,

[MORE] narrow distrib anodized alum open reflector 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	2398
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	28.2
Ballast Factor	1.00
CIE Type	Semi-Indirect
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-LM-WHU-ON-CSD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	46012	42268	47856
55	23221	23956	24026
65	759	4983	807
75	387	387	387
85	231	231	231

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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	1157.238	1157.238	1157.238	1157.238	1157.238	1157.238	1157.238	1157.238	1157.238
2.5	1148.361	1148.361	1146.747	1145.940	1146.747	1145.940	1146.747	1148.361	1148.361
5.0	1116.081	1116.081	1115.274	1114.467	1115.274	1114.467	1115.274	1116.081	1116.081
7.5	1069.275	1070.082	1068.468	1067.661	1067.661	1067.661	1068.468	1070.082	1069.275
10.0	1010.364	1011.978	1011.171	1008.750	1007.943	1008.750	1011.171	1011.978	1010.364
12.5	939.348	942.576	944.190	940.155	936.120	940.155	944.190	942.576	939.348
15.0	861.069	865.104	869.946	863.490	858.648	863.490	869.946	865.104	861.069
17.5	779.804	785.292	789.730	783.839	777.625	783.839	789.730	785.292	779.804
20.0	697.894	704.592	707.578	702.736	695.473	702.736	707.578	704.592	697.894
22.5	616.951	623.165	624.941	620.744	612.674	620.744	624.941	623.165	616.951
25.0	536.494	543.514	544.806	540.125	530.925	540.125	544.806	543.514	536.494
27.5	453.615	463.702	467.656	460.636	449.983	460.636	467.656	463.702	453.615
30.0	375.820	387.602	396.640	385.827	375.174	385.827	396.640	387.602	375.820
32.5	309.646	318.926	331.596	318.846	311.260	318.846	331.596	318.926	309.646
35.0	257.272	261.549	273.573	263.324	260.257	263.324	273.573	261.549	257.272
37.5	216.115	215.711	222.732	218.616	220.150	218.616	222.732	215.711	216.115
40.0	182.301	178.912	179.557	182.624	187.305	182.624	179.557	178.912	182.301
42.5	154.218	149.295	145.825	153.411	159.705	153.411	145.825	149.295	154.218
45.0	130.895	125.246	120.243	129.443	136.141	129.443	120.243	125.246	130.895
47.5	110.236	104.668	100.149	108.784	114.594	108.784	100.149	104.668	110.236
50.0	90.787	86.591	83.524	90.303	93.854	90.303	83.524	86.591	90.787
52.5	71.581	70.612	68.998	73.679	74.002	73.679	68.998	70.612	71.581
55.0	53.585	55.764	55.279	58.427	55.441	58.427	55.279	55.764	53.585
57.5	37.364	41.722	42.125	43.820	38.575	43.820	42.125	41.722	37.364
60.0	22.273	28.245	29.698	29.455	22.031	29.455	29.698	28.245	22.273
62.5	8.473	14.526	18.238	14.687	7.182	14.687	18.238	14.526	8.473
65.0	1.291	3.631	8.473	3.874	1.372	3.874	8.473	3.631	1.291
67.5	0.968	0.888	2.582	0.968	1.049	0.968	2.582	0.888	0.968
70.0	0.726	0.646	0.888	0.726	0.726	0.726	0.888	0.646	0.726
72.5	0.565	0.484	0.484	0.484	0.565	0.484	0.484	0.484	0.565
75.0	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
77.5	0.323	0.242	0.242	0.242	0.323	0.242	0.242	0.242	0.323
80.0	0.161	0.161	0.161	0.161	0.242	0.161	0.161	0.161	0.161
82.5	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161
85.0	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081
87.5	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.734	1.010	1.102	1.193	1.285	1.193	1.102	1.010	0.734
95.0	4.131	3.856	3.672	4.039	4.406	4.039	3.672	3.856	4.131
97.5	7.528	7.252	7.069	7.528	7.895	7.528	7.069	7.252	7.528
100.0	11.475	11.291	11.016	11.567	11.934	11.567	11.016	11.291	11.475
102.5	15.881	15.790	15.422	16.065	16.249	16.065	15.422	15.790	15.881
105.0	20.747	20.747	20.288	21.114	21.206	21.114	20.288	20.747	20.747
107.5	26.071	26.071	25.520	26.622	26.438	26.622	25.520	26.071	26.071
110.0	31.855	31.946	31.396	32.497	32.038	32.497	31.396	31.946	31.855
112.5	37.913	38.281	37.730	38.740	38.005	38.740	37.730	38.281	37.913
115.0	44.339	45.257	44.615	45.441	44.339	45.441	44.615	45.257	44.339
117.5	51.133	52.418	51.959	52.877	51.133	52.877	51.959	52.418	51.133
120.0	58.018	59.486	59.854	60.496	58.201	60.496	59.854	59.486	58.018
122.5	64.352	67.014	68.483	68.391	65.545	68.391	68.483	67.014	64.352
125.0	71.512	75.643	78.397	77.204	72.981	77.204	78.397	75.643	71.512
127.5	80.233	85.649	89.964	87.394	81.794	87.394	89.964	85.649	80.233
130.0	91.157	98.134	103.550	99.603	92.534	99.603	103.550	98.134	91.157
132.5	105.019	113.281	119.432	114.566	106.029	114.566	119.432	113.281	105.019

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135.0	121.635	130.815	136.966	131.825	122.186	131.825	136.966	130.815	121.635
137.5	141.005	150.185	157.345	151.103	141.280	151.103	157.345	150.185	141.005
140.0	163.037	171.666	183.049	173.043	163.037	173.043	183.049	171.666	163.037
142.5	186.538	196.452	216.923	199.390	186.538	199.390	216.923	196.452	186.538
145.0	212.976	228.215	264.659	232.805	215.271	232.805	264.659	228.215	212.976
147.5	249.237	273.748	329.287	278.154	253.368	278.154	329.287	273.748	249.237
150.0	303.766	340.394	406.031	342.230	305.786	342.230	406.031	340.394	303.766
152.5	384.458	424.942	491.773	427.696	382.531	427.696	491.773	424.942	384.458
155.0	488.192	529.594	597.710	537.489	491.314	537.489	597.710	529.594	488.192
157.5	631.217	679.504	751.842	698.873	649.669	698.873	751.842	679.504	631.217
160.0	874.395	930.852	1009.800	963.900	910.840	963.900	1009.800	930.852	874.395
162.5	1291.626	1343.952	1416.474	1377.000	1325.592	1377.000	1416.474	1343.952	1291.626
165.0	1864.458	1900.260	1951.668	1915.866	1872.720	1915.866	1951.668	1900.260	1864.458
167.5	2463.912	2477.682	2501.550	2474.010	2444.634	2474.010	2501.550	2477.682	2463.912
170.0	2938.518	2932.092	2940.354	2929.338	2915.568	2929.338	2940.354	2932.092	2938.518
172.5	3244.213	3232.279	3236.869	3238.705	3237.787	3238.705	3236.869	3232.279	3244.213
175.0	3449.844	3438.828	3445.254	3452.598	3456.270	3452.598	3445.254	3438.828	3449.844
177.5	3594.888	3581.118	3583.872	3593.970	3598.560	3593.970	3583.872	3581.118	3594.888
180.0	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000

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Zone	Lumens	%Lamp	%Fixt
0-20	342.90	N.A.	14.30
0-30	589.36	N.A.	24.60
0-40	757.57	N.A.	31.60
0-60	907.57	N.A.	37.90
0-80	916.16	N.A.	38.20
0-90	916.28	N.A.	38.20
10-90	813.16	N.A.	33.90
20-40	414.67	N.A.	17.30
20-50	514.34	N.A.	21.50
40-70	158.17	N.A.	6.60
60-80	8.59	N.A.	0.40
70-80	0.43	N.A.	0.00
80-90	0.11	N.A.	0.00
90-110	27.17	N.A.	1.10
90-120	71.89	N.A.	3.00
90-130	140.63	N.A.	5.90
90-150	393.83	N.A.	16.40
90-180	1481.52	N.A.	61.80
110-180	1454.35	N.A.	60.70
0-180	2397.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	103.11
10-20	239.79
20-30	246.46
30-40	168.21
40-50	99.67
50-60	50.33
60-70	8.17
70-80	0.43
80-90	0.11
90-100	4.93
100-110	22.24
110-120	44.72
120-130	68.75
130-140	101.64
140-150	151.55
150-160	259.83
160-170	514.79
170-180	313.08

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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	97	93	90	87	88	85	82	80	70	68	66	56	54	53	43	42	41	35
2	90	83	78	74	81	76	72	69	63	60	58	51	49	47	40	39	38	33
3	83	75	69	64	76	69	64	60	57	54	51	47	44	42	37	36	34	30
4	77	68	61	56	70	63	57	52	52	48	45	43	40	38	34	33	31	28
5	72	62	55	50	65	57	51	47	48	44	41	40	37	35	32	30	29	26
6	67	56	49	44	61	52	46	42	44	40	37	37	34	32	30	28	27	24
7	62	52	45	40	57	48	42	38	41	36	33	34	31	29	28	26	25	22
8	58	47	41	36	53	44	38	34	38	34	30	32	29	27	27	25	23	21
9	55	44	37	33	50	41	35	31	35	31	28	30	27	25	25	23	22	19
10	51	41	34	30	47	38	32	29	33	29	26	28	25	23	24	22	20	18

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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	12.9	13.5	14.0	14.6	16.0	13.2	13.9	14.3	14.9	16.4
	3H	12.7	13.3	13.8	14.3	15.8	13.0	13.6	14.1	14.7	16.1
	4H	12.6	13.1	13.7	14.2	15.7	12.9	13.4	14.0	14.5	16.0
	6H	12.5	13.0	13.6	14.0	15.5	12.8	13.3	13.9	14.4	15.8
	8H	12.4	12.9	13.5	14.0	15.4	12.7	13.2	13.8	14.3	15.8
	12H	12.3	12.8	13.5	13.9	15.4	12.7	13.1	13.8	14.2	15.7

UGR Viewed Endwise

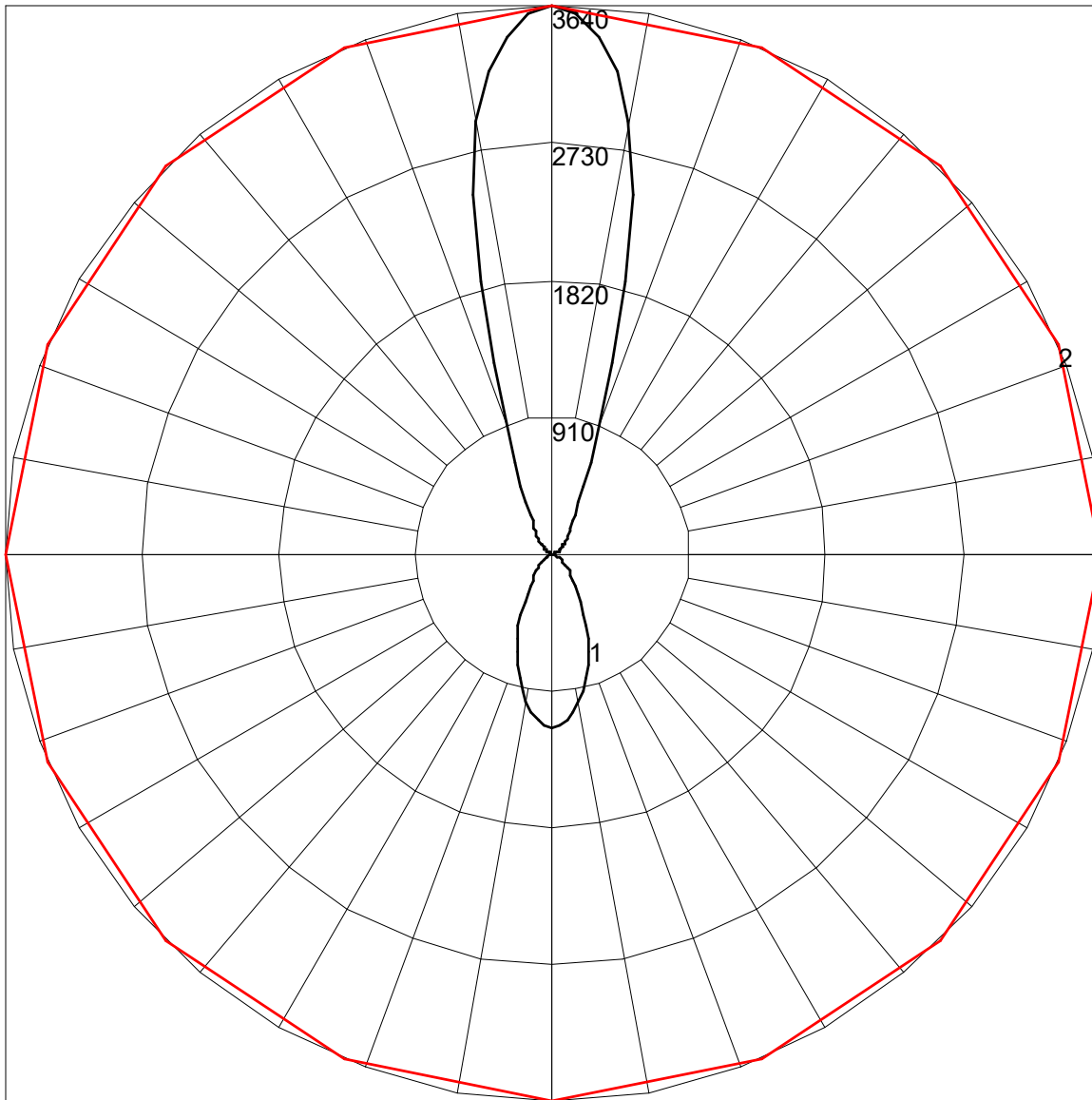
4H	2H	12.7	13.2	13.8	14.3	15.8	13.0	13.5	14.1	14.6	16.1
	3H	12.5	12.9	13.6	14.0	15.5	12.8	13.2	13.9	14.3	15.8
	4H	12.4	12.8	13.5	13.9	15.4	12.7	13.1	13.8	14.2	15.7
	6H	12.2	12.6	13.4	13.7	15.2	12.6	12.9	13.7	14.0	15.5
	8H	12.2	12.5	13.3	13.6	15.1	12.5	12.8	13.6	13.9	15.4
	12H	12.1	12.4	13.2	13.5	15.0	12.4	12.7	13.6	13.8	15.3
8H	4H	12.2	12.5	13.3	13.6	15.1	12.5	12.8	13.6	13.9	15.4
	6H	12.1	12.3	13.2	13.5	15.0	12.4	12.6	13.5	13.8	15.3
	8H	12.0	12.2	13.1	13.4	14.9	12.3	12.5	13.5	13.7	15.2
	12H	11.9	12.1	13.1	13.3	14.8	12.2	12.5	13.4	13.6	15.1
12H	4H	12.1	12.4	13.2	13.5	15.0	12.4	12.7	13.6	13.8	15.3
	6H	12.0	12.2	13.1	13.4	14.9	12.3	12.5	13.4	13.7	15.2
	8H	11.9	12.1	13.1	13.3	14.8	12.2	12.5	13.4	13.6	15.1

Maximum UGR = 16.4

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POLAR GRAPH



Maximum Candela = 3640 Located At Horizontal Angle = 0, Vertical Angle = 180

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)