



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.19 and #13257153.14

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

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

[MORE] wide distrib white painted flush 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	2775
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
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-LM-WHU-LW-WHD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	30911	38051	31449
55	25009	27070	25428
65	21854	22186	22091
75	17184	16875	17803
85	10344	8964	11034

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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	1492.712	1492.712	1492.712	1492.712	1492.712	1492.712	1492.712	1492.712	1492.712
2.5	1519.310	1497.548	1484.652	1480.622	1479.010	1480.622	1484.652	1497.548	1519.310
5.0	1506.414	1484.652	1472.562	1468.532	1466.920	1468.532	1472.562	1484.652	1506.414
7.5	1484.652	1462.890	1452.412	1449.188	1450.800	1449.188	1452.412	1462.890	1484.652
10.0	1456.442	1435.486	1427.426	1425.008	1424.202	1425.008	1427.426	1435.486	1456.442
12.5	1416.948	1398.410	1391.962	1390.350	1387.932	1390.350	1391.962	1398.410	1416.948
15.0	1362.140	1346.020	1343.602	1340.378	1335.542	1340.378	1343.602	1346.020	1362.140
17.5	1288.794	1275.898	1275.092	1270.256	1261.390	1270.256	1275.092	1275.898	1288.794
20.0	1185.626	1182.402	1188.850	1177.566	1155.804	1177.566	1188.850	1182.402	1185.626
22.5	1039.740	1057.472	1079.234	1051.830	1011.530	1051.830	1079.234	1057.472	1039.740
25.0	858.390	897.884	947.856	895.466	836.628	895.466	947.856	897.884	858.390
27.5	658.744	717.018	793.104	717.904	650.764	717.904	793.104	717.018	658.744
30.0	471.510	538.086	627.310	544.695	473.525	544.695	627.310	538.086	471.510
32.5	319.821	380.996	469.817	392.038	328.364	392.038	469.817	380.996	319.821
35.0	217.056	264.126	337.714	276.136	227.534	276.136	337.714	264.126	217.056
37.5	155.719	187.314	240.672	196.986	164.505	196.986	240.672	187.314	155.719
40.0	120.981	140.405	175.144	147.256	126.864	147.256	175.144	140.405	120.981
42.5	100.831	112.759	133.796	117.434	103.974	117.434	133.796	112.759	100.831
45.0	87.935	96.075	108.246	98.735	89.466	98.735	108.246	96.075	87.935
47.5	78.182	84.388	91.481	85.839	78.988	85.839	91.481	84.388	78.182
50.0	70.203	75.200	79.552	76.006	70.928	76.006	79.552	75.200	70.203
52.5	63.432	67.543	70.122	68.429	64.399	68.429	70.122	67.543	63.432
55.0	57.710	61.014	62.465	61.901	58.677	61.901	62.465	61.014	57.710
57.5	52.632	55.130	55.614	55.856	53.518	55.856	55.614	55.130	52.632
60.0	47.876	49.488	49.408	50.133	48.360	50.133	49.408	49.488	47.876
62.5	42.718	44.169	43.524	44.330	42.879	44.330	43.524	44.169	42.718
65.0	37.157	38.527	37.721	38.607	37.560	38.607	37.721	38.527	37.157
67.5	32.079	32.965	32.159	33.207	32.562	33.207	32.159	32.965	32.079
70.0	27.162	27.726	27.001	28.049	27.726	28.049	27.001	27.726	27.162
72.5	22.407	22.729	22.165	23.052	23.052	23.052	22.165	22.729	22.407
75.0	17.893	18.135	17.571	18.377	18.538	18.377	17.571	18.135	17.893
77.5	13.783	13.863	13.380	14.024	14.347	14.024	13.380	13.863	13.783
80.0	9.994	9.994	9.591	10.075	10.478	10.075	9.591	9.994	9.994
82.5	6.609	6.448	6.126	6.529	7.012	6.529	6.126	6.448	6.609
85.0	3.627	3.385	3.143	3.466	3.869	3.466	3.143	3.385	3.627
87.5	0.564	0.725	0.725	0.564	0.564	0.564	0.725	0.725	0.564
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	513.07	N.A.	18.50
0-30	913.28	N.A.	32.90
0-40	1098.34	N.A.	39.60
0-60	1231.98	N.A.	44.40
0-80	1289.1	N.A.	46.50
0-90	1293.33	N.A.	46.60
10-90	1153.72	N.A.	41.60
20-40	585.26	N.A.	21.10
20-50	664.04	N.A.	23.90
40-70	171.44	N.A.	6.20
60-80	57.12	N.A.	2.10
70-80	19.33	N.A.	0.70
80-90	4.23	N.A.	0.20
90-110	27.17	N.A.	1.00
90-120	71.89	N.A.	2.60
90-130	140.63	N.A.	5.10
90-150	393.83	N.A.	14.20
90-180	1481.52	N.A.	53.40
110-180	1454.35	N.A.	52.40
0-180	2774.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.61
10-20	373.46
20-30	400.21
30-40	185.06
40-50	78.78
50-60	54.87
60-70	37.79
70-80	19.33
80-90	4.23
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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47
1	99	95	92	89	91	88	85	83	74	72	71	61	60	59	50	49	48	43
2	92	86	81	76	84	79	75	71	67	64	62	57	55	53	46	45	44	39
3	85	77	71	67	79	72	67	63	62	58	55	52	50	48	43	42	40	36
4	79	70	64	59	73	66	60	56	57	53	49	48	46	43	41	39	37	34
5	74	64	58	53	69	60	54	50	52	48	45	45	42	39	38	36	34	31
6	69	59	52	47	64	55	49	45	49	44	41	42	39	36	36	34	32	29
7	65	55	48	43	60	51	45	41	45	41	37	39	36	34	34	32	30	27
8	61	51	44	39	57	48	42	38	42	38	34	37	34	31	32	30	28	26
9	58	47	41	36	54	44	39	35	39	35	32	35	31	29	30	28	26	24
10	54	44	38	33	51	42	36	32	37	33	30	33	30	27	29	26	25	23

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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	14.7	15.4	15.8	16.4	17.8	14.8	15.5	15.9	16.5	17.9
	3H	16.2	16.8	17.2	17.8	19.2	16.3	16.9	17.3	17.9	19.2
	4H	16.6	17.2	17.7	18.2	19.6	16.7	17.3	17.8	18.3	19.7
	6H	16.9	17.5	18.0	18.5	19.9	17.1	17.6	18.1	18.6	20.0
	8H	17.0	17.5	18.1	18.5	19.9	17.1	17.6	18.2	18.7	20.0
	12H	17.0	17.5	18.1	18.5	19.9	17.1	17.6	18.2	18.6	20.0

UGR Viewed Endwise

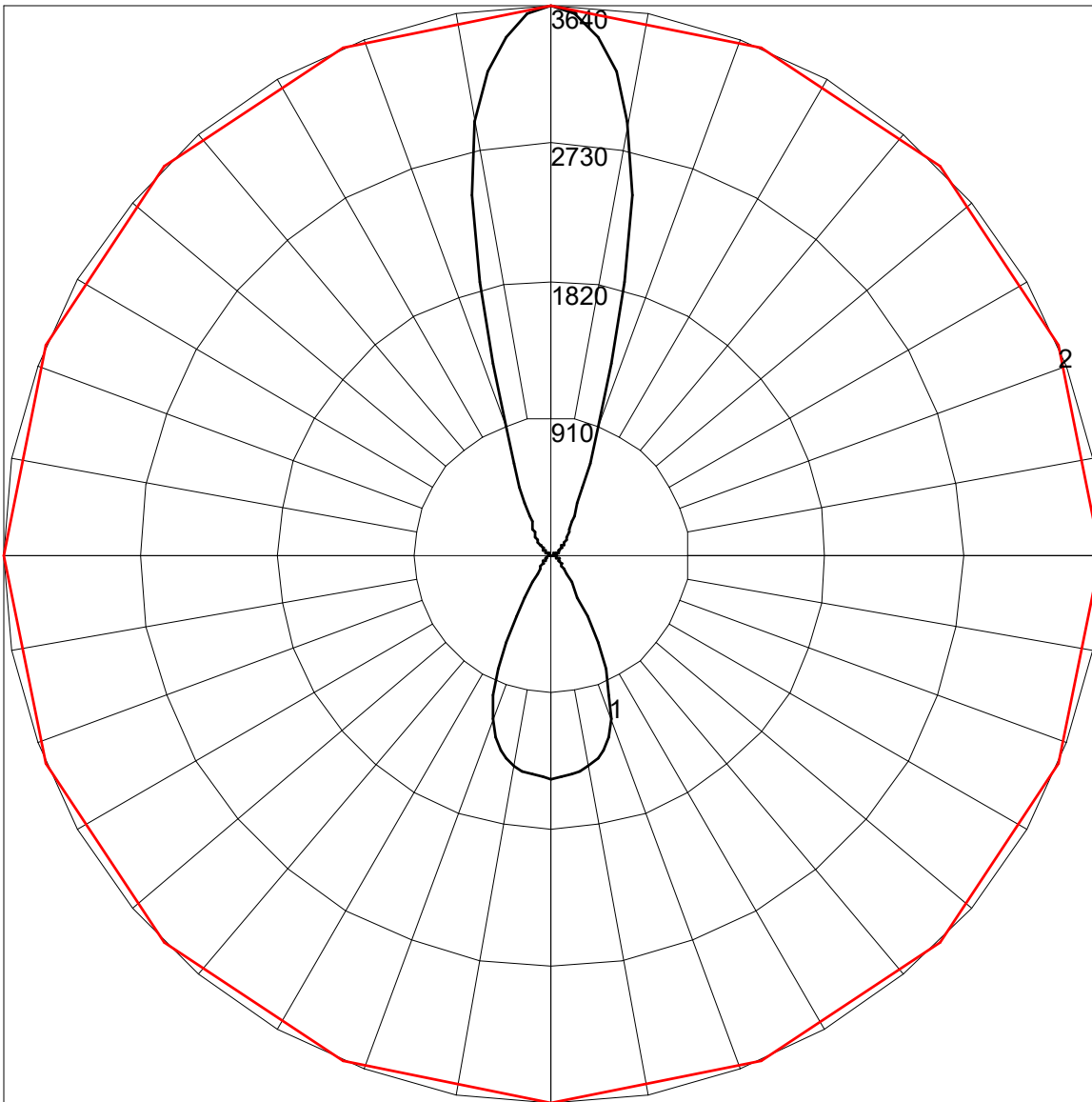
4H	2H	15.2	15.7	16.2	16.8	18.1	15.2	15.8	16.3	16.8	18.2
	3H	16.8	17.3	17.8	18.3	19.7	16.9	17.3	17.9	18.4	19.8
	4H	17.4	17.8	18.4	18.8	20.2	17.5	17.9	18.5	18.9	20.3
	6H	17.8	18.1	18.8	19.2	20.6	17.9	18.2	18.9	19.3	20.7
	8H	17.9	18.2	18.9	19.3	20.7	18.0	18.3	19.0	19.4	20.8
	12H	17.9	18.2	19.0	19.3	20.7	18.0	18.3	19.1	19.4	20.8
8H	4H	17.5	17.9	18.6	18.9	20.3	17.6	17.9	18.7	19.0	20.4
	6H	18.0	18.3	19.1	19.4	20.8	18.1	18.4	19.2	19.5	20.9
	8H	18.2	18.4	19.3	19.5	20.9	18.3	18.5	19.4	19.6	21.0
	12H	18.3	18.5	19.4	19.5	21.0	18.4	18.6	19.5	19.6	21.1
12H	4H	17.5	17.8	18.6	18.9	20.3	17.6	17.9	18.7	18.9	20.4
	6H	18.0	18.3	19.1	19.3	20.8	18.1	18.3	19.2	19.4	20.9
	8H	18.2	18.4	19.3	19.5	21.0	18.3	18.5	19.4	19.6	21.1

Maximum UGR = 21.1

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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.)