



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-P12-835U-P12-835D-XXX-POE PR-OM-CSU-ON-CSD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.18 & #13257153.21

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 20-APR-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-P12-835U-P12-835D-xxx-PoE-PR-OM-CSU-UN-CSD-WM

[LUMINAIRE] Aluminum housing, optics, and trim enclosure

[LAMP] Two white LEDs

[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	1966
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	23
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

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	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096
95.0	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096
97.5	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191	0.191
100.0	0.191	0.191	0.191	0.191	0.286	0.191	0.191	0.191	0.191
102.5	0.286	0.286	0.286	0.286	0.381	0.286	0.286	0.286	0.286
105.0	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477
107.5	0.572	0.572	0.572	0.572	0.668	0.572	0.572	0.572	0.572
110.0	0.858	0.763	1.049	0.858	0.858	0.858	1.049	0.763	0.858
112.5	1.144	1.049	3.527	1.144	1.240	1.144	3.527	1.049	1.144
115.0	1.525	4.766	11.153	5.147	1.621	5.147	11.153	4.766	1.525
117.5	10.676	18.874	22.687	19.161	9.914	19.161	22.687	18.874	10.676
120.0	28.693	35.460	35.651	36.795	28.884	36.795	35.651	35.460	28.693
122.5	47.090	50.999	49.568	53.381	48.902	53.381	49.568	50.999	47.090
125.0	65.964	66.823	64.153	70.158	68.729	70.158	64.153	66.823	65.964
127.5	86.363	83.313	79.309	87.507	89.891	87.507	79.309	83.313	86.363
130.0	107.240	101.425	95.420	106.096	111.910	106.096	95.420	101.425	107.240
132.5	128.497	121.538	113.817	126.686	134.693	126.686	113.817	121.538	128.497

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135.0	150.898	144.130	135.932	149.468	158.238	149.468	135.932	144.130	150.898
137.5	175.777	170.535	164.625	176.064	183.784	176.064	164.625	170.535	175.777
140.0	205.805	203.231	202.945	208.283	213.526	208.283	202.945	203.231	205.805
142.5	242.600	244.220	252.418	248.129	249.272	248.129	252.418	244.220	242.600
145.0	288.259	295.600	311.328	297.888	293.693	297.888	311.328	295.600	288.259
147.5	347.075	360.611	378.532	361.183	351.173	361.183	378.532	360.611	347.075
150.0	422.571	440.206	453.456	438.871	424.478	438.871	453.456	440.206	422.571
152.5	513.986	529.048	534.482	526.474	512.176	526.474	534.482	529.048	513.986
155.0	611.313	620.464	622.370	617.985	607.309	617.985	622.370	620.464	611.313
157.5	704.349	711.688	713.976	709.782	700.345	709.782	713.976	711.688	704.349
160.0	796.336	803.867	807.870	803.104	794.716	803.104	807.870	803.867	796.336
162.5	891.088	898.142	903.671	897.475	891.184	897.475	903.671	898.142	891.088
165.0	985.649	990.415	997.088	990.415	984.696	990.415	997.088	990.415	985.649
167.5	1075.254	1078.113	1081.926	1077.160	1074.300	1077.160	1081.926	1078.113	1075.254
170.0	1156.279	1157.232	1156.279	1156.279	1155.326	1156.279	1156.279	1157.232	1156.279
172.5	1223.006	1223.006	1221.099	1221.099	1222.052	1221.099	1221.099	1223.006	1223.006
175.0	1274.480	1275.434	1273.527	1273.527	1274.480	1273.527	1273.527	1275.434	1274.480
177.5	1310.704	1310.704	1307.844	1308.797	1309.750	1308.797	1307.844	1310.704	1310.704
180.0	1321.122	1321.122	1321.122	1321.122	1321.122	1321.122	1321.122	1321.122	1321.122

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Zone	Lumens	%Lamp	%Fixt
0-20	342.90	N.A.	17.40
0-30	589.36	N.A.	30.00
0-40	757.57	N.A.	38.50
0-60	907.57	N.A.	46.20
0-80	916.16	N.A.	46.60
0-90	916.28	N.A.	46.60
10-90	813.16	N.A.	41.40
20-40	414.67	N.A.	21.10
20-50	514.34	N.A.	26.20
40-70	158.17	N.A.	8.00
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	0.63	N.A.	0.00
90-120	11.01	N.A.	0.60
90-130	71.17	N.A.	3.60
90-150	376.21	N.A.	19.10
90-180	1049.84	N.A.	53.40
110-180	1049.21	N.A.	53.40
0-180	1966.12	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	0.13
100-110	0.50
110-120	10.38
120-130	60.15
130-140	114.47
140-150	190.57
150-160	281.29
160-170	274.48
170-180	117.87

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	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	90	91	88	85	83	74	73	71	62	60	59	50	49	49	43
2	92	86	81	77	85	80	75	72	68	65	62	57	55	53	47	45	44	40
3	85	78	72	67	79	72	67	63	62	58	55	52	50	48	44	42	41	37
4	80	71	64	59	73	66	60	56	57	53	49	48	46	43	41	39	37	34
5	74	64	57	52	69	60	54	50	52	48	45	45	42	39	38	36	34	31
6	69	59	52	47	64	55	49	45	48	44	40	42	39	36	36	33	32	29
7	65	54	47	43	60	51	45	41	45	40	37	39	36	33	34	31	29	27
8	61	50	43	39	56	47	41	37	42	37	34	37	33	31	32	29	27	25
9	57	47	40	36	53	44	38	34	39	34	31	34	31	28	30	27	26	24
10	54	43	37	33	50	41	35	32	37	32	29	32	29	27	28	26	24	22

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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	13.8	14.5	14.8	15.5	16.8	14.1	14.8	15.2	15.8	17.2
	3H	13.6	14.2	14.7	15.2	16.6	13.9	14.5	15.0	15.6	16.9
	4H	13.5	14.1	14.6	15.1	16.5	13.8	14.4	14.9	15.4	16.8
	6H	13.4	13.9	14.5	15.0	16.3	13.7	14.2	14.8	15.3	16.6
	8H	13.4	13.8	14.4	14.9	16.3	13.7	14.2	14.7	15.2	16.6
	12H	13.3	13.8	14.3	14.8	16.2	13.6	14.1	14.7	15.1	16.5

UGR Viewed Endwise

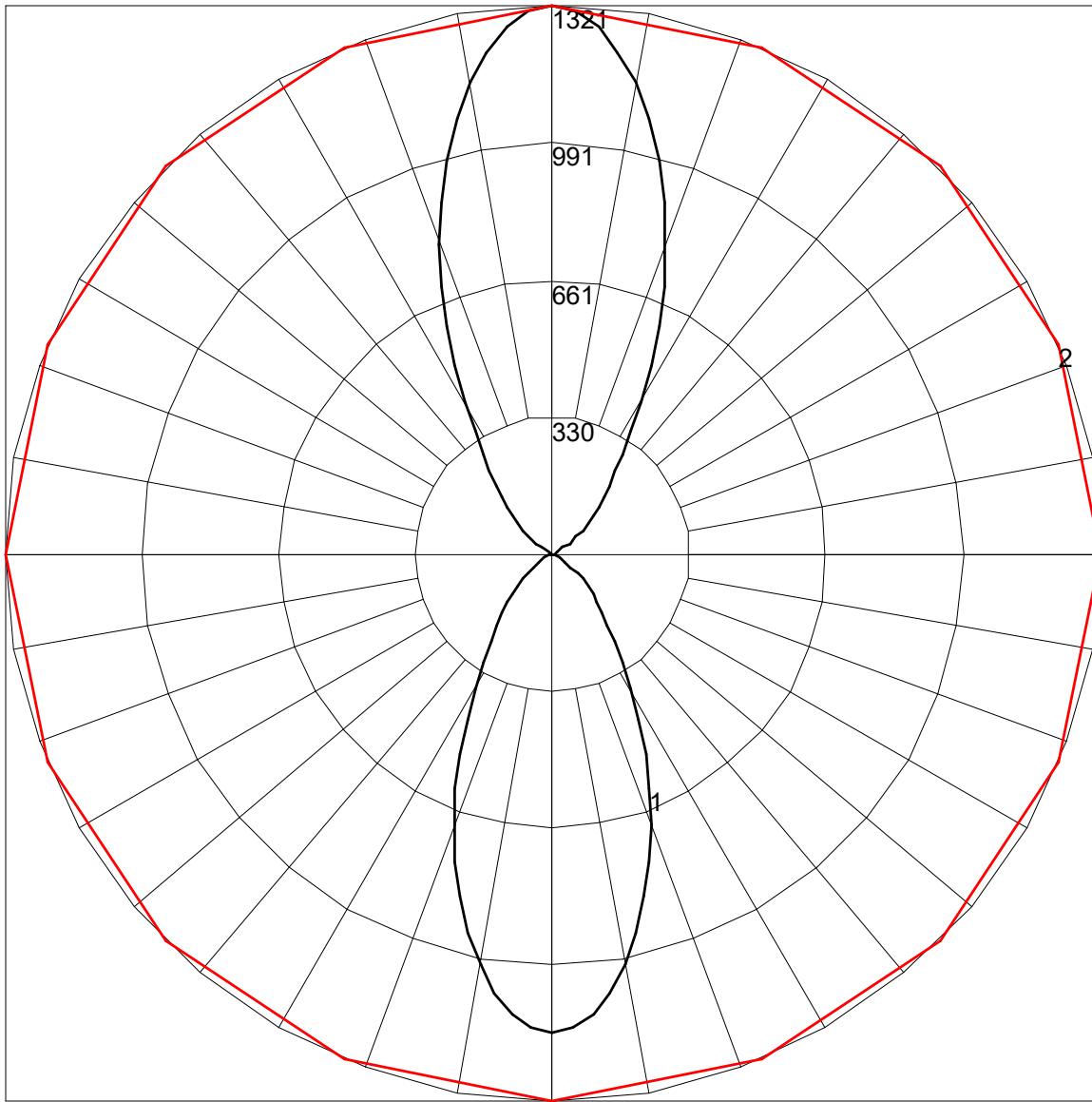
4H	2H	13.6	14.2	14.7	15.2	16.6	13.9	14.5	15.0	15.5	16.9
	3H	13.4	13.9	14.5	14.9	16.3	13.7	14.2	14.8	15.2	16.6
	4H	13.3	13.7	14.3	14.8	16.2	13.6	14.0	14.7	15.1	16.5
	6H	13.2	13.5	14.2	14.6	16.0	13.5	13.9	14.6	14.9	16.3
	8H	13.1	13.5	14.2	14.5	15.9	13.4	13.8	14.5	14.8	16.2
	12H	13.0	13.4	14.1	14.4	15.8	13.4	13.7	14.4	14.7	16.1
8H	4H	13.1	13.5	14.2	14.5	15.9	13.4	13.8	14.5	14.8	16.2
	6H	13.0	13.3	14.1	14.4	15.8	13.3	13.6	14.4	14.7	16.1
	8H	12.9	13.2	14.0	14.3	15.7	13.2	13.5	14.3	14.6	16.0
	12H	12.9	13.1	14.0	14.2	15.6	13.2	13.4	14.3	14.5	15.9
12H	4H	13.0	13.4	14.1	14.4	15.8	13.4	13.7	14.4	14.7	16.1
	6H	12.9	13.2	14.0	14.3	15.7	13.2	13.5	14.3	14.6	16.0
	8H	12.9	13.1	14.0	14.2	15.6	13.2	13.4	14.3	14.5	15.9

Maximum UGR = 17.2

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POLAR GRAPH



Maximum Candela = 1321.122 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.)