



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.18 & #13257153.19

[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-LM-WHD-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	2346
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
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	37397	42110	37566
55	27105	29714	27662
65	22808	22950	22808
75	17427	17042	17812
85	10304	9160	10991

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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	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311
2.5	3144.166	3132.122	3134.531	3143.363	3147.377	3143.363	3134.531	3132.122	3144.166
5.0	3017.307	3007.672	3013.293	3019.716	3022.927	3019.716	3013.293	3007.672	3017.307
7.5	2837.457	2827.019	2831.034	2832.640	2831.837	2832.640	2831.034	2827.019	2837.457
10.0	2570.091	2564.470	2571.696	2562.061	2550.018	2562.061	2571.696	2564.470	2570.091
12.5	2154.990	2167.034	2187.909	2163.822	2138.129	2163.822	2187.909	2167.034	2154.990
15.0	1630.695	1662.008	1706.970	1675.657	1637.921	1675.657	1706.970	1662.008	1630.695
17.5	1129.684	1175.449	1238.878	1204.354	1159.391	1204.354	1238.878	1175.449	1129.684
20.0	764.765	814.143	883.193	843.048	796.640	843.048	883.193	814.143	764.765
22.5	552.076	594.308	657.577	611.250	568.214	611.250	657.577	594.308	552.076
25.0	426.984	463.194	522.770	470.099	429.713	470.099	522.770	463.194	426.984
27.5	336.256	371.663	430.115	374.072	334.569	374.072	430.115	371.663	336.256
30.0	265.680	297.716	355.124	299.322	267.447	299.322	355.124	297.716	265.680
32.5	217.988	239.425	288.001	243.279	221.601	243.279	288.001	239.425	217.988
35.0	186.273	199.602	231.477	203.616	188.281	203.616	231.477	199.602	186.273
37.5	163.150	171.821	189.726	174.390	163.150	174.390	189.726	171.821	163.150
40.0	142.596	150.143	160.098	151.347	142.596	151.347	160.098	150.143	142.596
42.5	123.326	131.355	137.617	132.158	123.566	132.158	137.617	131.355	123.326
45.0	106.385	114.414	119.793	115.297	106.867	115.297	119.793	114.414	106.385
47.5	91.852	99.078	104.458	100.202	92.735	100.202	104.458	99.078	91.852
50.0	79.728	85.830	90.568	87.115	80.933	87.115	90.568	85.830	79.728
52.5	70.173	74.911	78.684	76.436	71.539	76.436	78.684	74.911	70.173
55.0	62.546	66.159	68.567	67.524	63.831	67.524	68.567	66.159	62.546
57.5	56.284	58.612	59.897	59.816	57.327	59.816	59.897	58.612	56.284
60.0	50.743	52.028	52.349	52.911	50.904	52.911	52.349	52.028	50.743
62.5	44.721	45.846	45.445	46.248	44.721	46.248	45.445	45.846	44.721
65.0	38.780	39.583	39.021	39.744	38.780	39.744	39.021	39.583	38.780
67.5	33.160	33.481	33.000	33.882	33.240	33.882	33.000	33.481	33.160
70.0	27.861	27.941	27.459	28.422	28.021	28.422	27.459	27.941	27.861
72.5	22.802	22.802	22.321	23.284	23.124	23.284	22.321	22.802	22.802
75.0	18.146	18.146	17.745	18.467	18.547	18.467	17.745	18.146	18.146
77.5	13.890	13.810	13.489	14.051	14.211	14.051	13.489	13.810	13.890
80.0	10.036	9.876	9.635	10.117	10.438	10.117	9.635	9.876	10.036
82.5	6.584	6.343	6.182	6.584	6.905	6.584	6.182	6.343	6.584
85.0	3.613	3.372	3.212	3.532	3.854	3.532	3.212	3.372	3.613
87.5	0.643	0.884	0.963	1.044	1.124	1.044	0.963	0.884	0.643
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	724.07	N.A.	30.90
0-30	951.33	N.A.	40.60
0-40	1083.88	N.A.	46.20
0-60	1232.9	N.A.	52.60
0-80	1291.46	N.A.	55.10
0-90	1295.77	N.A.	55.20
10-90	1021.95	N.A.	43.60
20-40	359.80	N.A.	15.30
20-50	448.70	N.A.	19.10
40-70	188.13	N.A.	8.00
60-80	58.57	N.A.	2.50
70-80	19.45	N.A.	0.80
80-90	4.31	N.A.	0.20
90-110	0.63	N.A.	0.00
90-120	11.01	N.A.	0.50
90-130	71.17	N.A.	3.00
90-150	376.21	N.A.	16.00
90-180	1049.84	N.A.	44.80
110-180	1049.21	N.A.	44.70
0-180	2345.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	273.83
10-20	450.24
20-30	227.25
30-40	132.55
40-50	88.90
50-60	60.13
60-70	39.11
70-80	19.45
80-90	4.31
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	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	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	101	98	95	92	94	91	89	87	79	77	76	68	67	66	58	57	56	51
2	95	89	84	80	88	83	79	76	73	70	67	63	61	59	54	53	52	48
3	89	81	75	71	83	76	71	67	67	64	61	59	56	54	51	50	48	45
4	83	75	68	64	78	70	65	61	63	59	55	55	52	50	49	47	45	42
5	78	69	63	58	73	65	60	56	59	54	51	52	49	47	46	44	42	39
6	74	64	58	53	69	61	55	51	55	51	47	49	46	44	44	42	40	37
7	70	60	54	49	66	57	51	47	52	47	44	47	43	41	42	40	38	36
8	66	56	50	46	62	54	48	44	49	45	41	44	41	39	40	38	36	34
9	63	53	47	43	59	51	45	42	46	42	39	42	39	37	39	36	34	33
10	60	50	44	40	57	48	43	39	44	40	37	41	37	35	37	35	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	16.0	16.7	16.9	17.7	18.9	UGR Viewed Endwise	16.1	16.9	17.1	17.8	19.0
	3H	17.3	18.0	18.3	18.9	20.1	17.4	18.1	18.4	19.0	20.3	
	4H	17.8	18.4	18.7	19.3	20.6	17.9	18.5	18.8	19.4	20.7	
	6H	18.0	18.6	19.0	19.5	20.8	18.1	18.7	19.1	19.7	20.9	
	8H	18.1	18.6	19.0	19.6	20.8	18.2	18.7	19.2	19.7	20.9	
	12H	18.1	18.6	19.1	19.6	20.8	18.2	18.7	19.2	19.7	21.0	

4H	2H	16.4	17.0	17.4	17.9	19.2	16.5	17.1	17.5	18.1	19.3	
	3H	17.9	18.4	18.9	19.4	20.6	18.0	18.5	19.0	19.5	20.7	
	4H	18.4	18.9	19.4	19.9	21.2	18.5	19.0	19.5	20.0	21.3	
	6H	18.8	19.2	19.8	20.2	21.5	18.9	19.3	19.9	20.3	21.6	
	8H	18.9	19.3	19.9	20.3	21.5	19.0	19.4	20.0	20.4	21.7	
	12H	18.9	19.3	19.9	20.3	21.5	19.0	19.4	20.0	20.4	21.7	

8H	4H	18.6	18.9	19.6	19.9	21.2	18.7	19.0	19.7	20.0	21.3	
	6H	19.0	19.3	20.0	20.4	21.6	19.1	19.4	20.1	20.5	21.7	
	8H	19.2	19.4	20.2	20.5	21.8	19.3	19.6	20.3	20.6	21.9	
	12H	19.3	19.5	20.3	20.5	21.8	19.4	19.6	20.4	20.6	22.0	

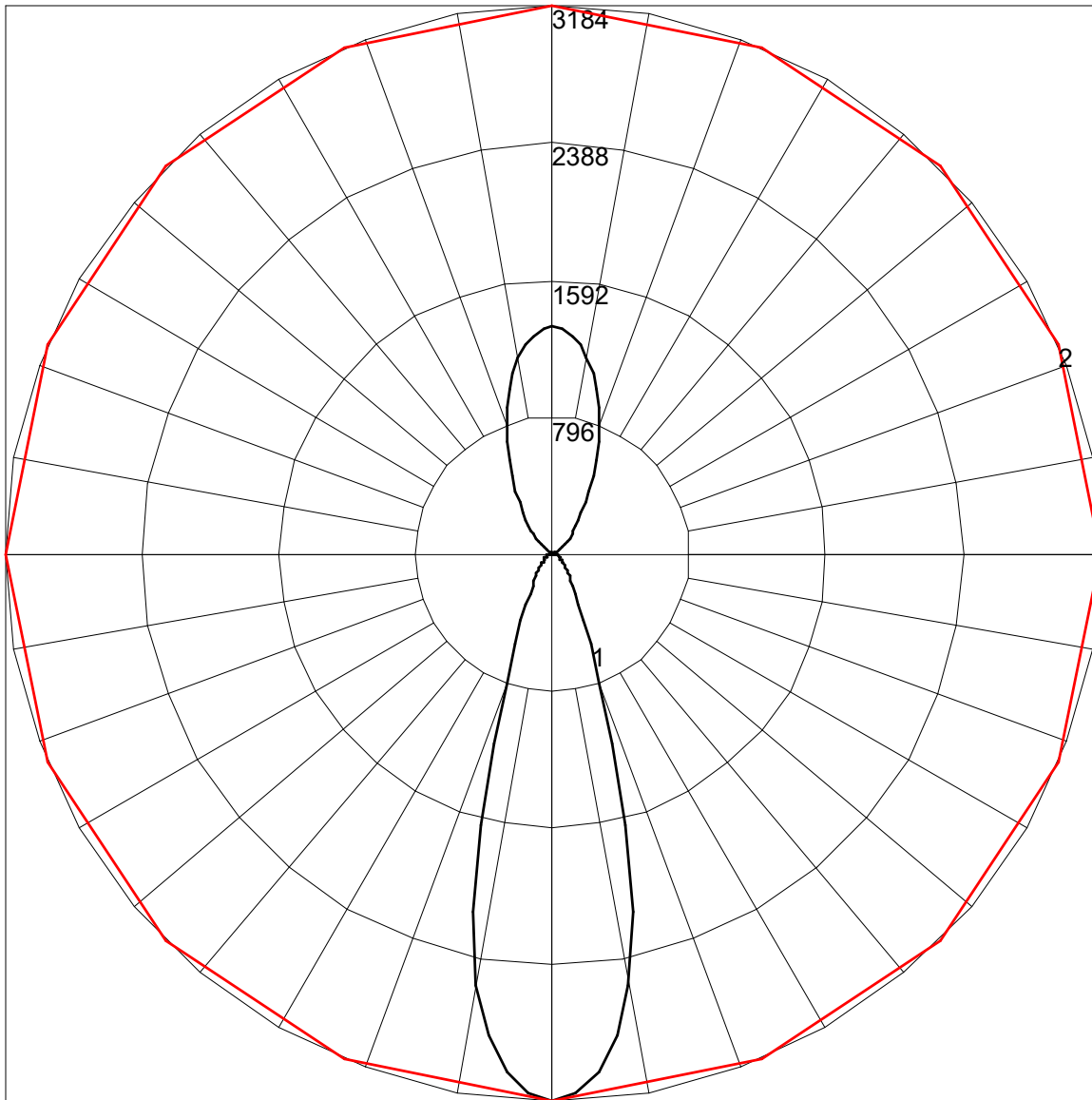
12H	4H	18.5	18.9	19.5	19.9	21.2	18.6	19.0	19.6	20.0	21.3	
	6H	19.0	19.3	20.1	20.3	21.6	19.1	19.4	20.2	20.4	21.7	
	8H	19.2	19.4	20.2	20.4	21.8	19.3	19.5	20.3	20.5	21.9	

Maximum UGR = 22.0

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POLAR GRAPH



Maximum Candela = 3184.311 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.)