



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 & #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-OW-CSU-ON-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, frosted lens enclosures

[LAMP] Two white LEDs (one up/one down)

[BALLAST] (2) ERP PHB30W-0700-42 Drivers

[OTHER] 24.9 C, 120 V, 0.1984 A, 23.44 W, 0.983 PF, 60 Hz

[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	2025
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
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 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	3416	2350	3553
55	1280	974	1325
65	29	140	31
75	9	6	9
85	2	1	2

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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	0.735	0.980	1.593	3.003	2.881	3.003	1.593	0.980	0.735
95.0	0.858	1.165	1.716	3.064	3.003	3.064	1.716	1.165	0.858
97.5	0.980	1.287	1.900	3.187	3.064	3.187	1.900	1.287	0.980
100.0	1.103	1.471	2.083	3.309	3.187	3.309	2.083	1.471	1.103
102.5	1.226	1.593	2.268	3.432	3.371	3.432	2.268	1.593	1.226
105.0	1.410	1.838	2.451	3.616	3.493	3.616	2.451	1.838	1.410
107.5	1.655	2.083	2.696	3.799	3.739	3.799	2.696	2.083	1.655
110.0	1.900	2.390	3.126	3.984	3.984	3.984	3.126	2.390	1.900
112.5	2.268	2.758	4.290	4.290	4.290	4.290	4.290	2.758	2.268
115.0	2.696	4.412	7.721	7.048	4.780	7.048	7.721	4.412	2.696
117.5	4.351	8.702	14.707	12.746	9.989	12.746	14.707	8.702	4.351
120.0	12.440	18.445	25.002	22.551	16.852	22.551	25.002	18.445	12.440
122.5	23.225	32.600	38.668	35.236	29.414	35.236	38.668	32.600	23.225
125.0	40.322	49.943	53.680	50.739	44.550	50.739	53.680	49.943	40.322
127.5	60.851	68.387	69.430	67.775	62.995	67.775	69.430	68.387	60.851
130.0	81.808	86.526	86.526	85.791	83.462	85.791	86.526	86.526	81.808
132.5	105.216	105.768	105.462	105.339	106.810	105.339	105.462	105.768	105.216

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135.0	129.973	126.909	126.787	127.032	131.689	127.032	126.787	126.909	129.973
137.5	156.691	151.543	152.462	152.279	158.652	152.279	152.462	151.543	156.691
140.0	186.963	182.366	187.146	184.450	189.536	184.450	187.146	182.366	186.963
142.5	224.894	222.750	234.698	227.529	229.980	227.529	234.698	222.750	224.894
145.0	273.856	279.126	297.938	283.906	281.638	283.906	297.938	279.126	273.856
147.5	341.324	355.112	375.824	358.666	350.700	358.666	375.824	355.112	341.324
150.0	433.242	450.400	466.946	451.749	439.555	451.749	466.946	450.400	433.242
152.5	552.798	561.438	566.892	553.472	543.667	553.472	566.892	561.438	552.798
155.0	683.261	683.873	675.294	662.426	653.234	662.426	675.294	683.873	683.261
157.5	813.172	811.946	794.176	781.307	772.728	781.307	794.176	811.946	813.172
160.0	937.568	935.730	919.797	907.542	899.575	907.542	919.797	935.730	937.568
162.5	1060.739	1056.450	1042.355	1029.487	1020.908	1029.487	1042.355	1056.450	1060.739
165.0	1173.492	1174.105	1163.688	1149.594	1142.240	1149.594	1163.688	1174.105	1173.492
167.5	1276.441	1276.441	1270.313	1260.509	1254.381	1260.509	1270.313	1276.441	1276.441
170.0	1376.939	1373.875	1369.585	1363.457	1359.780	1363.457	1369.585	1373.875	1376.939
172.5	1457.214	1453.537	1451.086	1447.409	1445.571	1447.409	1451.086	1453.537	1457.214
175.0	1516.042	1512.978	1510.527	1508.688	1508.688	1508.688	1510.527	1512.978	1516.042
177.5	1550.358	1547.907	1545.456	1546.681	1546.069	1546.681	1545.456	1547.907	1550.358
180.0	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383

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Zone	Lumens	%Lamp	%Fixt
0-20	342.90	N.A.	16.90
0-30	589.36	N.A.	29.10
0-40	757.57	N.A.	37.40
0-60	907.57	N.A.	44.80
0-80	916.16	N.A.	45.20
0-90	916.28	N.A.	45.20
10-90	813.16	N.A.	40.20
20-40	414.67	N.A.	20.50
20-50	514.34	N.A.	25.40
40-70	158.17	N.A.	7.80
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	4.69	N.A.	0.20
90-120	12.49	N.A.	0.60
90-130	57.24	N.A.	2.80
90-150	341.03	N.A.	16.80
90-180	1108.7	N.A.	54.80
110-180	1104.01	N.A.	54.50
0-180	2024.97	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	1.92
100-110	2.77
110-120	7.80
120-130	44.75
130-140	100.12
140-150	183.67
150-160	307.32
160-170	320.66
170-180	139.69

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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	52	52	52	45
1	99	95	92	89	91	88	85	83	74	72	70	61	59	58	49	48	47	42
2	92	86	81	76	84	79	75	71	67	64	62	56	54	52	46	44	43	39
3	85	77	71	66	78	72	67	62	61	58	54	51	49	47	42	41	40	36
4	79	70	63	58	73	65	60	55	56	52	49	48	45	42	40	38	36	33
5	74	64	57	52	68	60	54	49	52	47	44	44	41	39	37	35	33	30
6	69	58	52	47	64	55	49	44	48	43	40	41	38	35	35	33	31	28
7	64	54	47	42	60	50	44	40	44	40	36	38	35	32	33	30	29	26
8	60	50	43	38	56	47	41	37	41	37	33	36	32	30	31	28	27	25
9	57	46	40	35	53	43	38	34	38	34	31	34	30	28	29	27	25	23
10	54	43	37	32	50	41	35	31	36	32	29	32	28	26	28	25	23	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	2.6	3.3	3.6	4.3	5.6	2.9	3.6	3.9	4.6	5.9
	3H	2.5	3.0	3.4	4.0	5.4	2.7	3.3	3.8	4.3	5.7
	4H	2.5	2.9	3.3	3.9	5.3	2.6	3.2	3.7	4.2	5.6
	6H	2.5	2.7	3.2	3.7	5.1	2.5	3.0	3.5	4.0	5.4
	8H	2.5	2.6	3.2	3.7	5.0	2.5	2.9	3.5	4.0	5.3
	12H	2.5	2.5	3.1	3.6	5.0	2.5	2.8	3.4	3.9	5.3

UGR Viewed Endwise

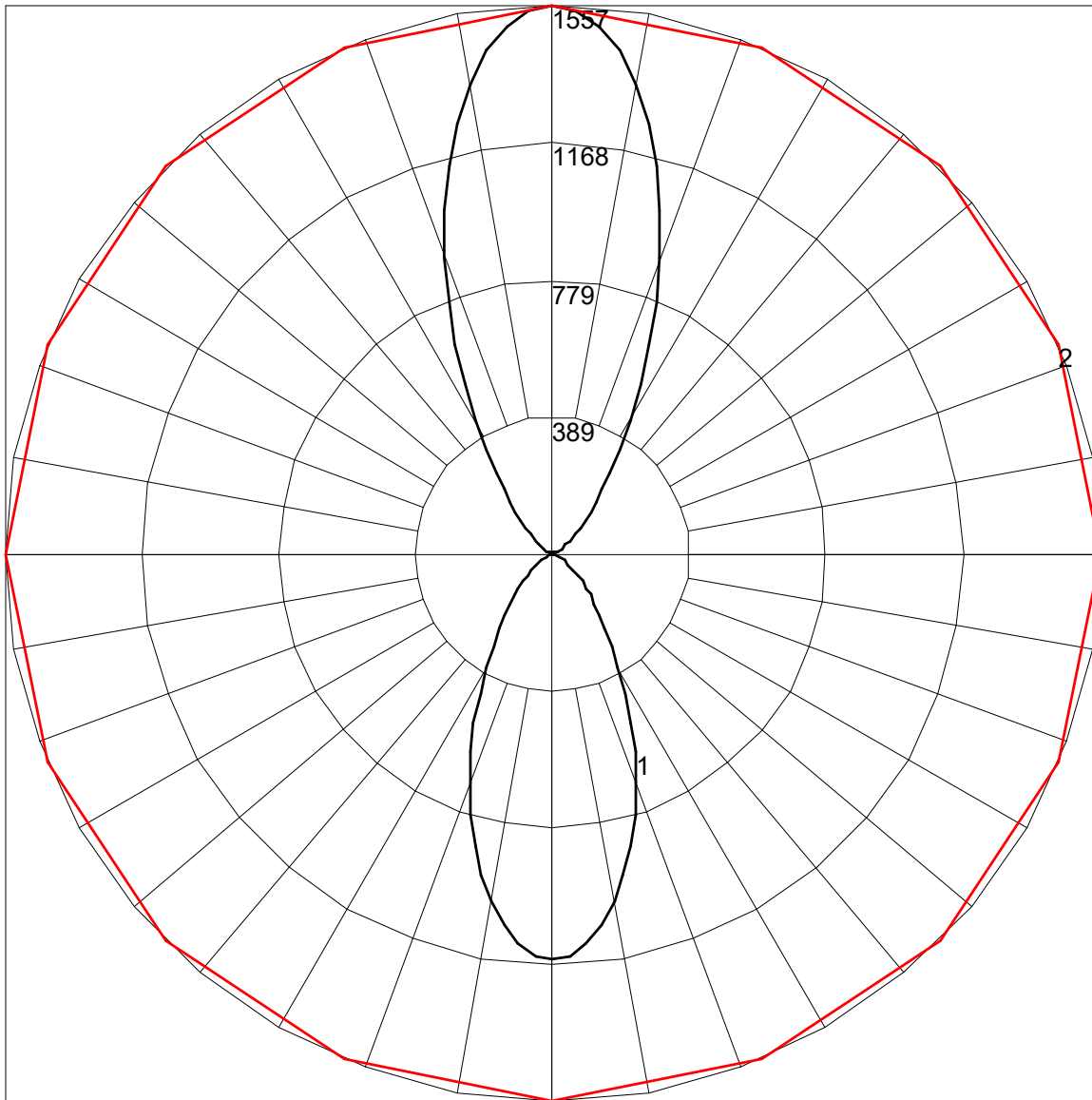
4H	2H	2.5	2.9	3.4	3.9	5.3	2.7	3.2	3.7	4.3	5.6
	3H	2.5	2.6	3.2	3.7	5.1	2.5	2.9	3.5	4.0	5.4
	4H	2.5	2.5	3.1	3.5	4.9	2.5	2.8	3.4	3.8	5.2
	6H	2.5	2.5	3.0	3.4	4.8	2.5	2.6	3.3	3.7	5.1
	8H	2.5	2.5	2.9	3.3	4.7	2.5	2.5	3.2	3.6	5.0
	12H	2.5	2.5	2.9	3.2	4.6	2.5	2.5	3.2	3.5	4.9
8H	4H	2.5	2.5	2.9	3.3	4.7	2.5	2.5	3.2	3.6	5.0
	6H	2.5	2.5	2.8	3.1	4.5	2.5	2.5	3.2	3.4	4.8
	8H	2.5	2.5	2.8	3.0	4.4	2.5	2.5	3.1	3.3	4.8
	12H	2.5	2.5	2.7	2.9	4.4	2.5	2.5	3.0	3.2	4.7
12H	4H	2.5	2.5	2.9	3.2	4.6	2.5	2.5	3.2	3.5	4.9
	6H	2.5	2.5	2.8	3.0	4.4	2.5	2.5	3.1	3.3	4.8
	8H	2.5	2.5	2.7	2.9	4.4	2.5	2.5	3.0	3.2	4.7

Maximum UGR = 5.9

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POLAR GRAPH



Maximum Candela = 1557.383 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.)