



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 & #13257153.18

[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-OM-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	1996
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
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	3330	2246	3492
55	1332	956	1388
65	29	156	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	1117.116	1117.116	1117.116	1117.116	1117.116	1117.116	1117.116	1117.116	1117.116
2.5	1108.250	1108.250	1105.832	1106.638	1107.444	1106.638	1105.832	1108.250	1108.250
5.0	1077.622	1078.428	1076.816	1076.816	1077.622	1076.816	1076.816	1078.428	1077.622
7.5	1034.098	1034.098	1032.486	1032.486	1033.292	1032.486	1032.486	1034.098	1034.098
10.0	977.678	978.484	977.678	977.678	976.872	977.678	977.678	978.484	977.678
12.5	909.168	911.586	914.810	910.780	908.362	910.780	914.810	911.586	909.168
15.0	833.404	837.434	843.076	837.434	832.598	837.434	843.076	837.434	833.404
17.5	753.449	759.413	764.088	758.849	753.529	758.849	764.088	759.413	753.449
20.0	673.332	679.700	683.085	679.055	671.962	679.055	683.085	679.700	673.332
22.5	595.553	601.760	603.694	600.148	592.168	600.148	603.694	601.760	595.553
25.0	516.888	524.625	526.237	522.530	513.503	522.530	526.237	524.625	516.888
27.5	434.595	447.330	451.924	445.154	433.064	445.154	451.924	447.330	434.595
30.0	357.300	372.211	383.414	371.082	358.912	371.082	383.414	372.211	357.300
32.5	293.465	304.910	320.063	305.393	296.930	305.393	320.063	304.910	293.465
35.0	243.734	249.941	263.240	251.875	248.329	251.875	263.240	249.941	243.734
37.5	205.127	206.497	213.429	209.802	210.769	209.802	213.429	206.497	205.127
40.0	174.015	171.839	171.597	176.111	180.544	176.111	171.597	171.839	174.015
42.5	148.626	144.193	139.196	148.868	155.397	148.868	139.196	144.193	148.626
45.0	127.590	121.867	114.936	126.381	133.796	126.381	114.936	121.867	127.590
47.5	108.649	102.765	96.236	107.117	113.888	107.117	96.236	102.765	108.649
50.0	90.675	85.758	80.681	89.708	94.624	89.708	80.681	85.758	90.675
52.5	73.024	70.444	67.059	73.991	76.006	73.991	67.059	70.444	73.024
55.0	55.775	56.501	54.244	59.322	58.113	59.322	54.244	56.501	55.775
57.5	39.816	43.121	41.912	45.136	41.348	45.136	41.912	43.121	39.816
60.0	24.261	29.983	30.144	31.112	24.422	31.112	30.144	29.983	24.261
62.5	9.027	15.959	19.183	16.201	8.382	16.201	19.183	15.959	9.027
65.0	1.290	4.030	9.430	4.352	1.370	4.352	9.430	4.030	1.290
67.5	0.967	0.887	2.982	0.967	1.048	0.967	2.982	0.887	0.967
70.0	0.725	0.645	0.887	0.725	0.725	0.725	0.887	0.645	0.725
72.5	0.484	0.484	0.484	0.484	0.564	0.484	0.484	0.484	0.484
75.0	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
77.5	0.242	0.242	0.242	0.242	0.322	0.242	0.242	0.242	0.242
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	331.75	N.A.	16.60
0-30	569.59	N.A.	28.50
0-40	730.72	N.A.	36.60
0-60	878.37	N.A.	44.00
0-80	887.57	N.A.	44.50
0-90	887.68	N.A.	44.50
10-90	788.02	N.A.	39.50
20-40	398.97	N.A.	20.00
20-50	495.76	N.A.	24.80
40-70	156.43	N.A.	7.80
60-80	9.20	N.A.	0.50
70-80	0.42	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.	2.90
90-150	341.03	N.A.	17.10
90-180	1108.7	N.A.	55.50
110-180	1104.01	N.A.	55.30
0-180	1996.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	99.66
10-20	232.09
20-30	237.84
30-40	161.13
40-50	96.79
50-60	50.86
60-70	8.78
70-80	0.42
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	80	80	80	65	65	65	51	51	51	44
1	98	95	92	89	90	87	85	82	73	71	70	60	59	58	48	47	47	41
2	91	85	80	76	84	79	75	71	67	64	61	55	53	52	45	44	43	38
3	85	77	71	66	78	71	66	62	61	57	54	51	48	46	42	40	39	35
4	79	70	63	58	73	65	59	55	56	52	48	47	44	42	39	37	36	32
5	73	64	57	52	68	59	53	49	51	47	43	44	41	38	37	35	33	30
6	69	58	51	46	63	54	48	44	47	43	39	41	37	35	34	32	30	28
7	64	53	47	42	59	50	44	40	44	39	36	38	34	32	32	30	28	26
8	60	49	43	38	56	46	40	36	41	36	33	35	32	30	30	28	26	24
9	56	46	39	35	52	43	37	33	38	34	30	33	30	27	29	26	25	23
10	53	43	36	32	49	40	35	31	36	31	28	31	28	26	27	25	23	21

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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	2.8	3.5	3.9	4.5	5.9	3.1	3.8	4.2	4.8	6.2
	3H	2.6	3.2	3.7	4.3	5.6	2.9	3.5	4.0	4.6	6.0
	4H	2.5	3.1	3.6	4.1	5.5	2.8	3.4	3.9	4.4	5.8
	6H	2.4	2.9	3.5	4.0	5.4	2.7	3.2	3.8	4.3	5.7
	8H	2.4	2.8	3.4	3.9	5.3	2.7	3.2	3.7	4.2	5.6
	12H	2.4	2.8	3.4	3.8	5.2	2.6	3.1	3.7	4.1	5.5

UGR Viewed Endwise

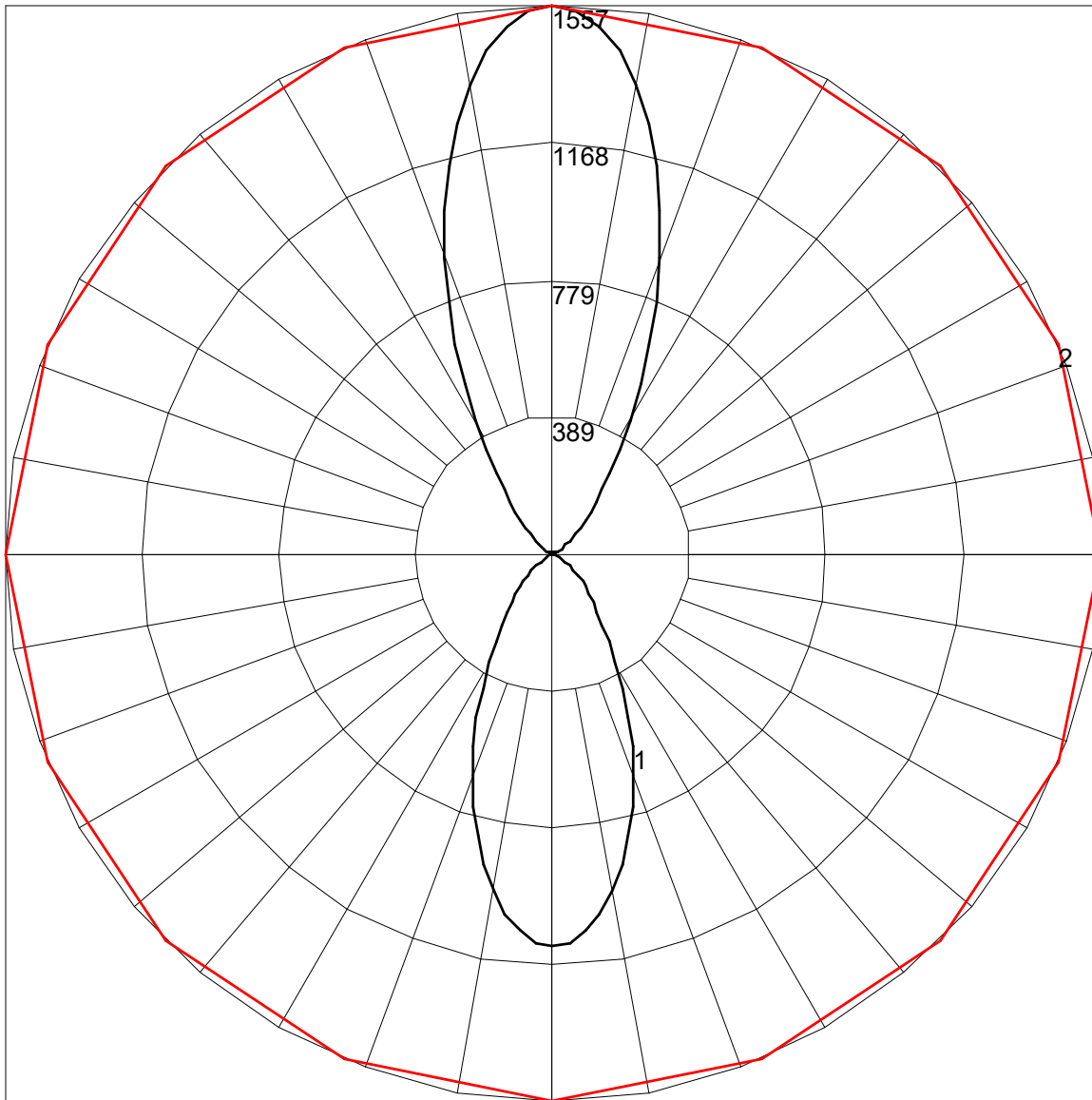
4H	2H	2.6	3.2	3.7	4.2	5.6	2.9	3.5	4.0	4.5	5.9
	3H	2.4	2.9	3.5	3.9	5.3	2.7	3.2	3.8	4.2	5.6
	4H	2.4	2.7	3.3	3.8	5.2	2.6	3.0	3.6	4.1	5.5
	6H	2.4	2.5	3.2	3.6	5.0	2.5	2.8	3.5	3.9	5.3
	8H	2.4	2.4	3.2	3.5	4.9	2.4	2.7	3.5	3.8	5.2
	12H	2.4	2.4	3.1	3.4	4.9	2.4	2.6	3.4	3.7	5.2
8H	4H	2.4	2.4	3.2	3.5	4.9	2.4	2.7	3.5	3.8	5.2
	6H	2.4	2.4	3.1	3.4	4.8	2.4	2.6	3.4	3.7	5.1
	8H	2.4	2.4	3.0	3.3	4.7	2.4	2.5	3.3	3.6	5.0
	12H	2.4	2.4	3.0	3.2	4.7	2.4	2.4	3.3	3.5	4.9
12H	4H	2.4	2.4	3.1	3.4	4.9	2.4	2.6	3.4	3.7	5.2
	6H	2.4	2.4	3.0	3.3	4.7	2.4	2.5	3.3	3.5	5.0
	8H	2.4	2.4	3.0	3.2	4.7	2.4	2.4	3.3	3.5	4.9

Maximum UGR = 6.2

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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.)