



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 & #13257153.26

[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-RS-WHD-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	2483
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
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	1949	1770	1925
55	892	740	870
65	444	324	465
75	145	119	166
85	21	30	42

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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	13396.643	13396.643	13396.643	13396.643	13396.643	13396.643	13396.643	13396.643	13396.643
2.5	12155.003	12164.339	12164.339	12173.675	12155.003	12173.675	12164.339	12164.339	12155.003
5.0	9252.553	9260.955	9142.392	9021.962	8972.484	9021.962	9142.392	9260.955	9252.553
7.5	5964.540	5969.208	5754.489	5535.101	5463.217	5535.101	5754.489	5969.208	5964.540
10.0	3385.103	3380.435	3159.181	2956.597	2888.447	2956.597	3159.181	3380.435	3385.103
12.5	1783.107	1789.642	1644.940	1521.709	1467.563	1521.709	1644.940	1789.642	1783.107
15.0	993.312	998.913	936.365	867.281	834.606	867.281	936.365	998.913	993.312
17.5	636.691	646.960	626.421	590.946	568.540	590.946	626.421	646.960	636.691
20.0	466.782	483.586	487.320	459.313	436.908	459.313	487.320	483.586	466.782
22.5	371.558	389.296	404.233	376.226	354.754	376.226	404.233	389.296	371.558
25.0	302.475	324.880	343.552	315.545	295.006	315.545	343.552	324.880	302.475
27.5	252.996	271.667	295.006	265.132	245.527	265.132	295.006	271.667	252.996
30.0	206.318	227.790	254.863	220.321	198.849	220.321	254.863	227.790	206.318
32.5	170.842	187.646	218.454	181.111	164.307	181.111	218.454	187.646	170.842
35.0	142.835	156.839	183.912	150.304	137.234	150.304	183.912	156.839	142.835
37.5	122.297	132.566	153.105	127.898	121.363	127.898	153.105	132.566	122.297
40.0	105.493	112.961	127.898	111.094	104.559	111.094	127.898	112.961	105.493
42.5	88.689	97.091	107.360	95.224	87.755	95.224	107.360	97.091	88.689
45.0	74.685	82.154	90.556	81.220	73.752	81.220	90.556	82.154	74.685
47.5	61.615	68.150	74.685	67.217	60.682	67.217	74.685	68.150	61.615
50.0	51.346	56.947	62.549	56.014	50.412	56.014	62.549	56.947	51.346
52.5	42.944	47.612	51.346	46.678	42.010	46.678	51.346	47.612	42.944
55.0	37.343	40.143	42.010	39.210	36.409	39.210	42.010	40.143	37.343
57.5	31.741	33.608	33.608	32.675	31.741	32.675	33.608	33.608	31.741
60.0	28.007	28.940	28.007	28.007	28.007	28.007	28.007	28.940	28.007
62.5	23.339	24.273	23.339	24.273	24.273	24.273	23.339	24.273	23.339
65.0	19.605	20.538	19.605	20.538	20.538	20.538	19.605	20.538	19.605
67.5	15.871	16.804	15.871	16.804	16.804	16.804	15.871	16.804	15.871
70.0	13.070	13.070	12.136	14.003	14.003	14.003	12.136	13.070	13.070
72.5	10.269	10.269	9.336	10.269	10.269	10.269	9.336	10.269	10.269
75.0	6.535	7.469	7.469	7.469	7.469	7.469	7.469	7.469	6.535
77.5	3.734	3.734	4.668	4.668	3.734	4.668	4.668	3.734	3.734
80.0	2.801	2.801	2.801	2.801	2.801	2.801	2.801	2.801	2.801
82.5	1.867	1.867	1.867	1.867	2.801	1.867	1.867	1.867	1.867
85.0	0.934	0.934	1.867	1.867	1.867	1.867	1.867	0.934	0.934
87.5	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934
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	994.50	N.A.	40.10
0-30	1144.34	N.A.	46.10
0-40	1245.16	N.A.	50.10
0-60	1344.94	N.A.	54.20
0-80	1372.8	N.A.	55.30
0-90	1374.38	N.A.	55.30
10-90	699.41	N.A.	28.20
20-40	250.66	N.A.	10.10
20-50	314.37	N.A.	12.70
40-70	119.86	N.A.	4.80
60-80	27.86	N.A.	1.10
70-80	7.78	N.A.	0.30
80-90	1.59	N.A.	0.10
90-110	4.69	N.A.	0.20
90-120	12.49	N.A.	0.50
90-130	57.24	N.A.	2.30
90-150	341.03	N.A.	13.70
90-180	1108.7	N.A.	44.70
110-180	1104.01	N.A.	44.50
0-180	2483.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	674.97
10-20	319.52
20-30	149.84
30-40	100.82
40-50	63.71
50-60	36.07
60-70	20.07
70-80	7.78
80-90	1.59
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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	102	99	96	94	95	93	90	88	80	79	77	69	68	67	59	58	58	53
2	96	91	87	83	90	86	82	79	75	73	70	66	64	62	57	56	55	51
3	91	84	79	75	85	80	75	72	71	68	65	62	60	59	55	53	52	49
4	86	79	73	69	81	75	70	66	67	63	61	60	57	55	53	51	50	47
5	82	74	68	64	77	70	65	62	63	60	57	57	55	53	51	50	48	46
6	78	70	64	60	74	66	61	58	60	57	54	55	52	50	50	48	47	44
7	75	66	60	56	71	63	58	55	58	54	51	53	50	48	48	46	45	43
8	72	63	57	54	68	60	55	52	56	52	49	51	49	47	47	45	44	42
9	69	60	55	51	65	58	53	50	54	50	47	50	47	45	46	44	43	41
10	66	58	52	49	63	56	51	48	52	48	46	48	46	44	45	43	42	40

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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	3.3	3.3	3.3	3.3	3.7	3.3	3.3	3.3	3.3	3.5
	3H	3.3	3.3	3.3	3.3	4.3	3.3	3.3	3.3	3.3	4.2
	4H	3.3	3.3	3.3	3.3	4.3	3.3	3.3	3.3	3.3	4.3
	6H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.2
	8H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.1
	12H	3.3	3.3	3.3	3.3	4.1	3.3	3.3	3.3	3.3	4.1

UGR Viewed Endwise

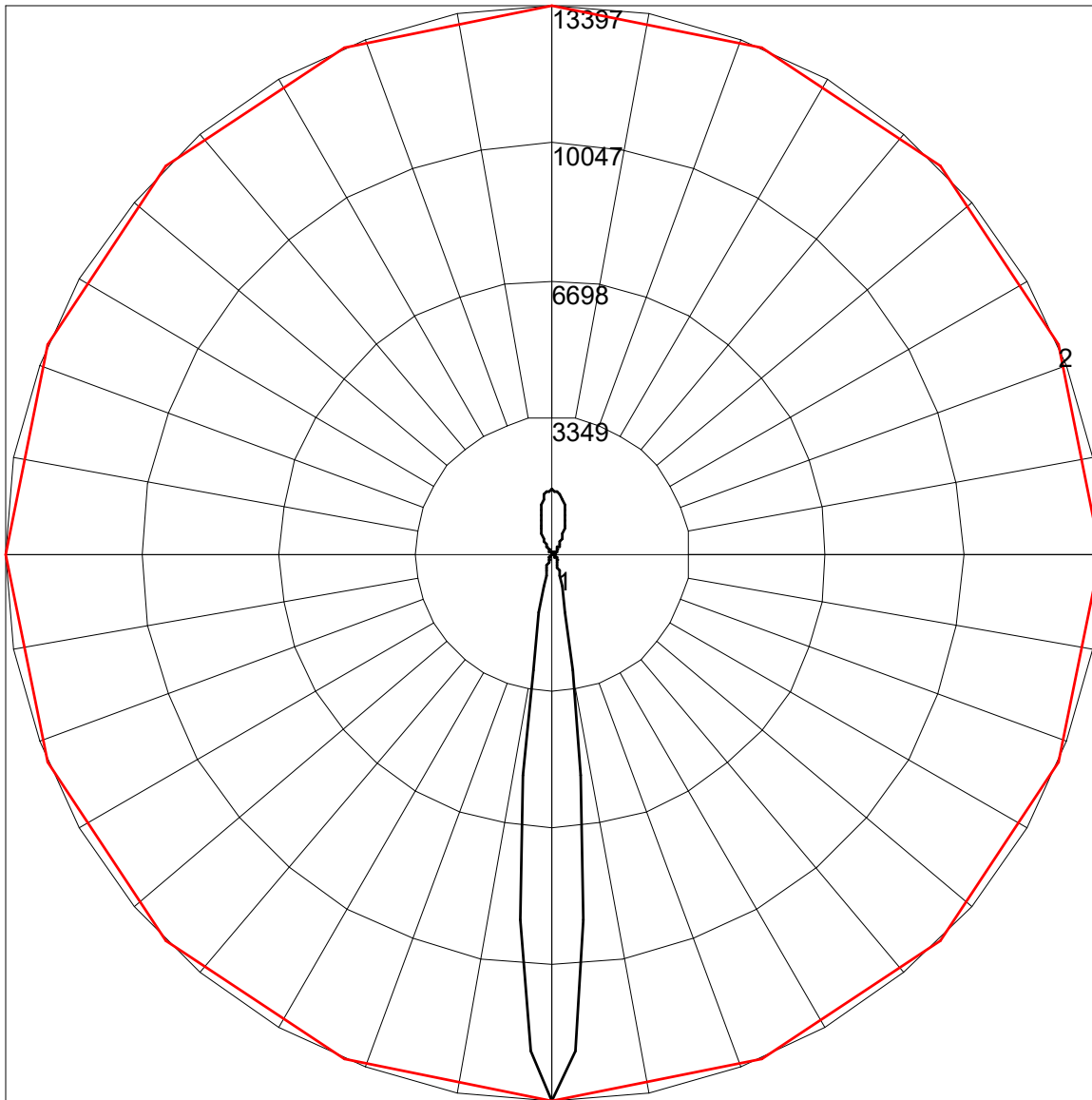
4H	2H	3.3	3.3	3.3	3.3	3.7	3.3	3.3	3.3	3.3	3.5
	3H	3.3	3.3	3.3	3.3	4.4	3.3	3.3	3.3	3.3	4.3
	4H	3.3	3.3	3.3	3.3	4.5	3.3	3.3	3.3	3.3	4.4
	6H	3.3	3.3	3.3	3.3	4.4	3.3	3.3	3.3	3.3	4.4
	8H	3.3	3.3	3.3	3.3	4.3	3.3	3.3	3.3	3.3	4.3
	12H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.2
8H	4H	3.3	3.3	3.3	3.3	4.3	3.3	3.3	3.3	3.3	4.3
	6H	3.3	3.3	3.3	3.3	4.3	3.3	3.3	3.3	3.3	4.2
	8H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.2
	12H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.2
12H	4H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.2
	6H	3.3	3.3	3.3	3.3	4.2	3.3	3.3	3.3	3.3	4.2
	8H	3.3	3.3	3.3	3.3	4.1	3.3	3.3	3.3	3.3	4.2

Maximum UGR = 4.5

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POLAR GRAPH



Maximum Candela = 13396.643 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.)