



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-WHU-LS-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.19 and UL #13257153.25

[TESTLAB]

[ISSUE DATE] 4-FE-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-L12-835U-L12-835D-xxx-DIM1-UNV-LM-WHU-LS-WHD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib white painted flush prismatic lens trim up,

[MORE] narrow spot distrib white painted flush prismatic lens trim down

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

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

[OTHER]

[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	2948
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	34.2978
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-WHU-LS-WHD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	26716	31285	27067
55	19501	21668	19934
65	16468	16468	16468
75	11524	12485	12485
85	8556	8556	8556

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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	14140.000	14140.000	14140.000	14140.000	14140.000	14140.000	14140.000	14140.000	14140.000
2.5	12630.000	12690.000	12840.000	12980.000	13020.000	12980.000	12840.000	12690.000	12630.000
5.0	9394.000	9529.000	9686.000	9798.000	9865.000	9798.000	9686.000	9529.000	9394.000
7.5	5877.000	6045.000	6150.000	6218.000	6290.000	6218.000	6150.000	6045.000	5877.000
10.0	3225.000	3370.000	3426.000	3469.000	3501.000	3469.000	3426.000	3370.000	3225.000
12.5	1694.000	1783.000	1805.000	1832.000	1822.000	1832.000	1805.000	1783.000	1694.000
15.0	964.000	1010.000	1026.000	1028.000	1013.000	1028.000	1026.000	1010.000	964.000
17.5	636.000	665.000	684.000	666.000	644.000	666.000	684.000	665.000	636.000
20.0	470.000	495.000	523.000	500.000	469.000	500.000	523.000	495.000	470.000
22.5	373.000	397.000	429.000	397.000	362.000	397.000	429.000	397.000	373.000
25.0	294.000	322.000	360.000	321.000	292.000	321.000	360.000	322.000	294.000
27.5	234.000	262.000	304.000	262.000	231.000	262.000	304.000	262.000	234.000
30.0	192.000	213.000	254.000	210.000	188.000	210.000	254.000	213.000	192.000
32.5	160.000	175.000	210.000	175.000	161.000	175.000	210.000	175.000	160.000
35.0	139.000	149.000	171.000	149.000	139.000	149.000	171.000	149.000	139.000
37.5	122.000	129.000	142.000	129.000	121.000	129.000	142.000	129.000	122.000
40.0	105.000	113.000	120.000	113.000	105.000	113.000	120.000	113.000	105.000
42.5	89.000	98.000	103.000	98.000	90.000	98.000	103.000	98.000	89.000
45.0	76.000	84.000	89.000	85.000	77.000	85.000	89.000	84.000	76.000
47.5	65.000	72.000	76.000	72.000	67.000	72.000	76.000	72.000	65.000
50.0	57.000	63.000	66.000	63.000	58.000	63.000	66.000	63.000	57.000
52.5	50.000	55.000	57.000	56.000	52.000	56.000	57.000	55.000	50.000
55.0	45.000	48.000	50.000	49.000	46.000	49.000	50.000	48.000	45.000
57.5	40.000	43.000	43.000	43.000	41.000	43.000	43.000	43.000	40.000
60.0	37.000	38.000	38.000	39.000	37.000	39.000	38.000	38.000	37.000
62.5	32.000	34.000	33.000	33.000	32.000	33.000	33.000	34.000	32.000
65.0	28.000	29.000	28.000	29.000	28.000	29.000	28.000	29.000	28.000
67.5	23.000	25.000	24.000	25.000	24.000	25.000	24.000	25.000	23.000
70.0	19.000	21.000	20.000	21.000	20.000	21.000	20.000	21.000	19.000
72.5	16.000	16.000	16.000	17.000	17.000	17.000	16.000	16.000	16.000
75.0	12.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	12.000
77.5	9.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	9.000
80.0	7.000	7.000	7.000	8.000	8.000	8.000	7.000	7.000	7.000
82.5	4.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	4.000
85.0	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
87.5	1.000	1.000	1.000	2.000	1.000	2.000	1.000	1.000	1.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.734	1.010	1.102	1.193	1.285	1.193	1.102	1.010	0.734
95.0	4.131	3.856	3.672	4.039	4.406	4.039	3.672	3.856	4.131
97.5	7.528	7.252	7.069	7.528	7.895	7.528	7.069	7.252	7.528
100.0	11.475	11.291	11.016	11.567	11.934	11.567	11.016	11.291	11.475
102.5	15.881	15.790	15.422	16.065	16.249	16.065	15.422	15.790	15.881
105.0	20.747	20.747	20.288	21.114	21.206	21.114	20.288	20.747	20.747
107.5	26.071	26.071	25.520	26.622	26.438	26.622	25.520	26.071	26.071
110.0	31.855	31.946	31.396	32.497	32.038	32.497	31.396	31.946	31.855
112.5	37.913	38.281	37.730	38.740	38.005	38.740	37.730	38.281	37.913
115.0	44.339	45.257	44.615	45.441	44.339	45.441	44.615	45.257	44.339
117.5	51.133	52.418	51.959	52.877	51.133	52.877	51.959	52.418	51.133
120.0	58.018	59.486	59.854	60.496	58.201	60.496	59.854	59.486	58.018
122.5	64.352	67.014	68.483	68.391	65.545	68.391	68.483	67.014	64.352
125.0	71.512	75.643	78.397	77.204	72.981	77.204	78.397	75.643	71.512
127.5	80.233	85.649	89.964	87.394	81.794	87.394	89.964	85.649	80.233
130.0	91.157	98.134	103.550	99.603	92.534	99.603	103.550	98.134	91.157
132.5	105.019	113.281	119.432	114.566	106.029	114.566	119.432	113.281	105.019

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135.0	121.635	130.815	136.966	131.825	122.186	131.825	136.966	130.815	121.635
137.5	141.005	150.185	157.345	151.103	141.280	151.103	157.345	150.185	141.005
140.0	163.037	171.666	183.049	173.043	163.037	173.043	183.049	171.666	163.037
142.5	186.538	196.452	216.923	199.390	186.538	199.390	216.923	196.452	186.538
145.0	212.976	228.215	264.659	232.805	215.271	232.805	264.659	228.215	212.976
147.5	249.237	273.748	329.287	278.154	253.368	278.154	329.287	273.748	249.237
150.0	303.766	340.394	406.031	342.230	305.786	342.230	406.031	340.394	303.766
152.5	384.458	424.942	491.773	427.696	382.531	427.696	491.773	424.942	384.458
155.0	488.192	529.594	597.710	537.489	491.314	537.489	597.710	529.594	488.192
157.5	631.217	679.504	751.842	698.873	649.669	698.873	751.842	679.504	631.217
160.0	874.395	930.852	1009.800	963.900	910.840	963.900	1009.800	930.852	874.395
162.5	1291.626	1343.952	1416.474	1377.000	1325.592	1377.000	1416.474	1343.952	1291.626
165.0	1864.458	1900.260	1951.668	1915.866	1872.720	1915.866	1951.668	1900.260	1864.458
167.5	2463.912	2477.682	2501.550	2474.010	2444.634	2474.010	2501.550	2477.682	2463.912
170.0	2938.518	2932.092	2940.354	2929.338	2915.568	2929.338	2940.354	2932.092	2938.518
172.5	3244.213	3232.279	3236.869	3238.705	3237.787	3238.705	3236.869	3232.279	3244.213
175.0	3449.844	3438.828	3445.254	3452.598	3456.270	3452.598	3445.254	3438.828	3449.844
177.5	3594.888	3581.118	3583.872	3593.970	3598.560	3593.970	3583.872	3581.118	3594.888
180.0	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000	3640.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1062.6	N.A.	36.00
0-30	1214.35	N.A.	41.20
0-40	1311.61	N.A.	44.50
0-60	1420.49	N.A.	48.20
0-80	1462.9	N.A.	49.60
0-90	1466.38	N.A.	49.70
10-90	749.80	N.A.	25.40
20-40	249.01	N.A.	8.40
20-50	314.27	N.A.	10.70
40-70	137.32	N.A.	4.70
60-80	42.41	N.A.	1.40
70-80	13.97	N.A.	0.50
80-90	3.49	N.A.	0.10
90-110	27.17	N.A.	0.90
90-120	71.89	N.A.	2.40
90-130	140.63	N.A.	4.80
90-150	393.83	N.A.	13.40
90-180	1481.52	N.A.	50.30
110-180	1454.35	N.A.	49.30
0-180	2947.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	716.58
10-20	346.01
20-30	151.76
30-40	97.26
40-50	65.25
50-60	43.62
60-70	28.44
70-80	13.97
80-90	3.49
90-100	4.93
100-110	22.24
110-120	44.72
120-130	68.75
130-140	101.64
140-150	151.55
150-160	259.83
160-170	514.79
170-180	313.08

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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	100	97	94	92	93	90	88	86	77	75	74	65	64	63	54	53	53	47
2	94	89	85	81	87	83	79	76	72	69	67	61	60	58	52	51	50	45
3	89	82	77	72	83	77	72	69	67	64	61	58	56	54	50	48	47	44
4	84	76	70	66	78	72	67	63	63	60	57	55	53	51	48	46	45	42
5	80	71	65	61	74	67	62	58	60	56	53	53	50	48	46	45	43	41
6	76	67	61	57	71	63	58	54	57	53	50	51	48	46	45	43	42	39
7	72	63	57	53	68	60	55	51	54	50	48	49	46	44	44	42	41	38
8	69	60	54	50	65	57	52	49	52	48	45	47	44	42	42	41	39	37
9	66	57	51	48	62	55	50	46	50	46	44	46	43	41	41	40	38	37
10	64	55	49	46	60	52	48	44	48	45	42	44	42	40	40	39	37	36

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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	12.9	13.5	13.9	14.5	15.8	12.9	13.6	13.9	14.6	15.9
	3H	14.2	14.8	15.2	15.8	17.1	14.3	14.8	15.3	15.8	17.2
	4H	14.5	15.1	15.6	16.1	17.4	14.7	15.2	15.7	16.2	17.6
	6H	14.8	15.3	15.8	16.3	17.6	14.9	15.5	16.0	16.5	17.8
	8H	14.8	15.3	15.8	16.3	17.6	15.0	15.5	16.0	16.5	17.8
	12H	14.8	15.3	15.9	16.3	17.6	15.0	15.5	16.1	16.5	17.9

UGR Viewed Endwise

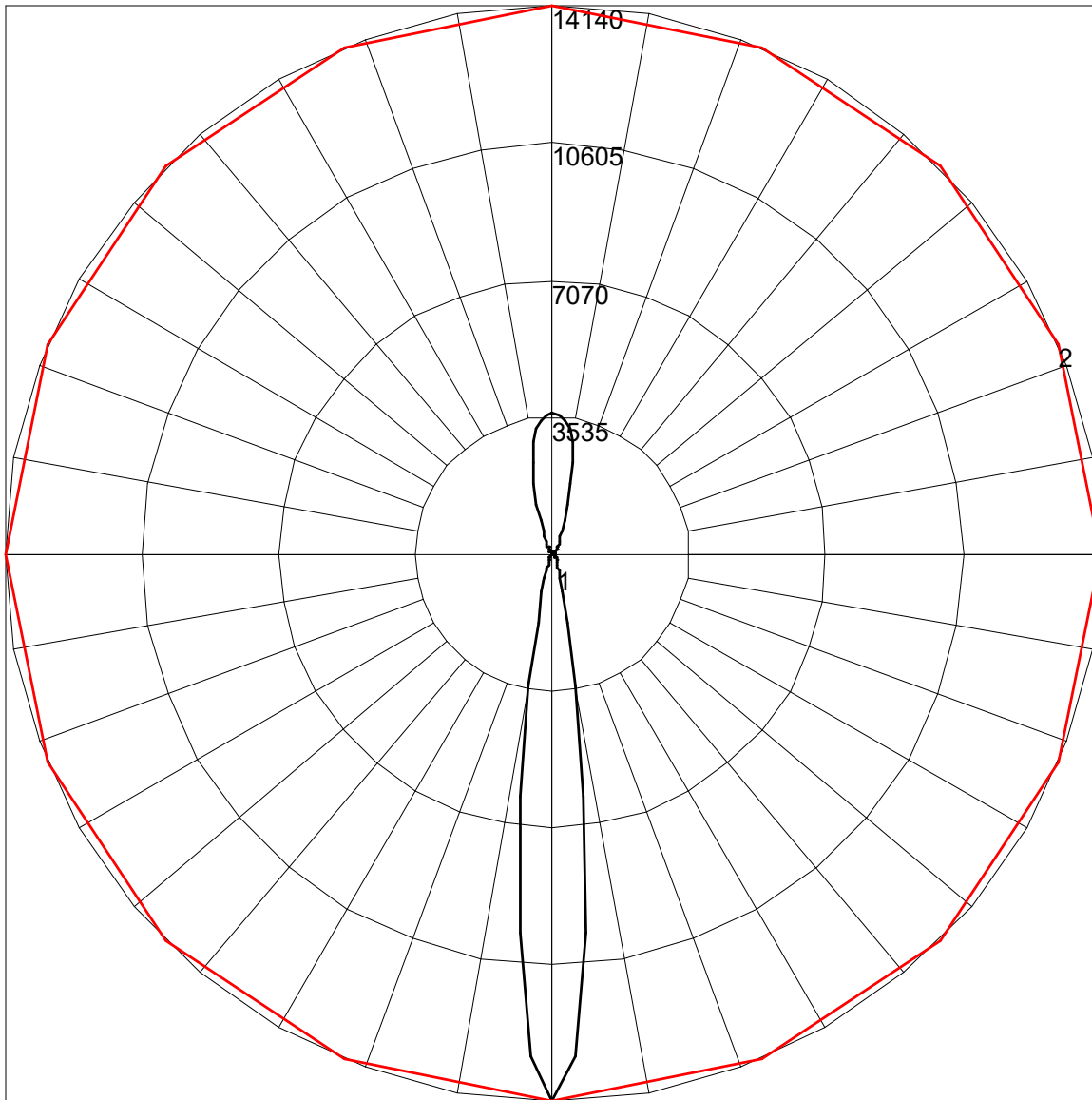
4H	2H	13.2	13.8	14.3	14.8	16.1	13.3	13.8	14.3	14.8	16.2
	3H	14.7	15.2	15.8	16.2	17.6	14.8	15.3	15.8	16.3	17.6
	4H	15.2	15.7	16.3	16.7	18.0	15.3	15.8	16.4	16.8	18.1
	6H	15.5	15.9	16.6	17.0	18.3	15.7	16.1	16.8	17.1	18.5
	8H	15.6	16.0	16.7	17.0	18.4	15.8	16.2	16.9	17.2	18.6
	12H	15.7	16.0	16.7	17.0	18.4	15.9	16.2	16.9	17.2	18.6
8H	4H	15.4	15.7	16.4	16.7	18.1	15.5	15.8	16.5	16.8	18.2
	6H	15.8	16.1	16.9	17.1	18.5	16.0	16.2	17.0	17.3	18.7
	8H	15.9	16.2	17.0	17.2	18.6	16.1	16.4	17.2	17.4	18.8
	12H	16.0	16.2	17.1	17.3	18.7	16.2	16.4	17.3	17.5	18.9
12H	4H	15.3	15.6	16.4	16.7	18.1	15.4	15.7	16.5	16.8	18.1
	6H	15.8	16.0	16.9	17.1	18.5	16.0	16.2	17.0	17.2	18.7
	8H	16.0	16.2	17.0	17.2	18.7	16.1	16.4	17.2	17.4	18.8

Maximum UGR = 18.9

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POLAR GRAPH



Maximum Candela = 14140 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.)