



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LW-WHD-WM\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.06 and #13257153.01

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CRDI-L12-835U-L12-835D-xxx-DIM1-UNV-LM-CSU-LW-WHD-WM

[MORE]

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

[MORE] wide 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	2705
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	28.5
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	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 ft (Diameter)
Luminous Height	0.00 ft

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LW-WHD-WM\_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	54756	54756	54756
55	47823	47823	47823
65	40852	40852	40852
75	32959	32959	32959
85	18461	18461	18461

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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>	<u>202.5</u>
<b>0.0</b>	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387
<b>2.5</b>	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545
<b>5.0</b>	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405
<b>7.5</b>	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809
<b>10.0</b>	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336
<b>12.5</b>	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951
<b>15.0</b>	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426
<b>17.5</b>	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691
<b>20.0</b>	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255
<b>22.5</b>	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469
<b>25.0</b>	832.824	832.824	832.824	832.824	832.824	832.824	832.824	832.824	832.824	832.824
<b>27.5</b>	638.337	638.337	638.337	638.337	638.337	638.337	638.337	638.337	638.337	638.337
<b>30.0</b>	463.944	463.944	463.944	463.944	463.944	463.944	463.944	463.944	463.944	463.944
<b>32.5</b>	330.386	330.386	330.386	330.386	330.386	330.386	330.386	330.386	330.386	330.386
<b>35.0</b>	241.212	241.212	241.212	241.212	241.212	241.212	241.212	241.212	241.212	241.212
<b>37.5</b>	186.820	186.820	186.820	186.820	186.820	186.820	186.820	186.820	186.820	186.820
<b>40.0</b>	154.944	154.944	154.944	154.944	154.944	154.944	154.944	154.944	154.944	154.944
<b>42.5</b>	135.415	135.415	135.415	135.415	135.415	135.415	135.415	135.415	135.415	135.415
<b>45.0</b>	122.341	122.341	122.341	122.341	122.341	122.341	122.341	122.341	122.341	122.341
<b>47.5</b>	112.173	112.173	112.173	112.173	112.173	112.173	112.173	112.173	112.173	112.173
<b>50.0</b>	103.135	103.135	103.135	103.135	103.135	103.135	103.135	103.135	103.135	103.135
<b>52.5</b>	94.742	94.742	94.742	94.742	94.742	94.742	94.742	94.742	94.742	94.742
<b>55.0</b>	86.672	86.672	86.672	86.672	86.672	86.672	86.672	86.672	86.672	86.672
<b>57.5</b>	78.682	78.682	78.682	78.682	78.682	78.682	78.682	78.682	78.682	78.682
<b>60.0</b>	70.612	70.612	70.612	70.612	70.612	70.612	70.612	70.612	70.612	70.612
<b>62.5</b>	62.542	62.542	62.542	62.542	62.542	62.542	62.542	62.542	62.542	62.542
<b>65.0</b>	54.553	54.553	54.553	54.553	54.553	54.553	54.553	54.553	54.553	54.553
<b>67.5</b>	47.129	47.129	47.129	47.129	47.129	47.129	47.129	47.129	47.129	47.129
<b>70.0</b>	40.108	40.108	40.108	40.108	40.108	40.108	40.108	40.108	40.108	40.108
<b>72.5</b>	33.410	33.410	33.410	33.410	33.410	33.410	33.410	33.410	33.410	33.410
<b>75.0</b>	26.954	26.954	26.954	26.954	26.954	26.954	26.954	26.954	26.954	26.954
<b>77.5</b>	20.982	20.982	20.982	20.982	20.982	20.982	20.982	20.982	20.982	20.982
<b>80.0</b>	15.414	15.414	15.414	15.414	15.414	15.414	15.414	15.414	15.414	15.414
<b>82.5</b>	10.087	10.087	10.087	10.087	10.087	10.087	10.087	10.087	10.087	10.087
<b>85.0</b>	5.084	5.084	5.084	5.084	5.084	5.084	5.084	5.084	5.084	5.084
<b>87.5</b>	0.968	0.968	0.968	0.968	0.968	0.968	0.968	0.968	0.968	0.968
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>92.5</b>	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014	1.014
<b>95.0</b>	5.239	5.239	5.239	5.239	5.239	5.239	5.239	5.239	5.239	5.239
<b>97.5</b>	10.478	10.478	10.478	10.478	10.478	10.478	10.478	10.478	10.478	10.478
<b>100.0</b>	15.886	15.886	15.886	15.886	15.886	15.886	15.886	15.886	15.886	15.886
<b>102.5</b>	21.717	21.717	21.717	21.717	21.717	21.717	21.717	21.717	21.717	21.717
<b>105.0</b>	27.970	27.970	27.970	27.970	27.970	27.970	27.970	27.970	27.970	27.970
<b>107.5</b>	34.730	34.730	34.730	34.730	34.730	34.730	34.730	34.730	34.730	34.730
<b>110.0</b>	41.912	41.912	41.912	41.912	41.912	41.912	41.912	41.912	41.912	41.912
<b>112.5</b>	49.517	49.517	49.517	49.517	49.517	49.517	49.517	49.517	49.517	49.517
<b>115.0</b>	57.629	57.629	57.629	57.629	57.629	57.629	57.629	57.629	57.629	57.629
<b>117.5</b>	66.502	66.502	66.502	66.502	66.502	66.502	66.502	66.502	66.502	66.502
<b>120.0</b>	75.797	75.797	75.797	75.797	75.797	75.797	75.797	75.797	75.797	75.797
<b>122.5</b>	85.261	85.261	85.261	85.261	85.261	85.261	85.261	85.261	85.261	85.261
<b>125.0</b>	95.147	95.147	95.147	95.147	95.147	95.147	95.147	95.147	95.147	95.147
<b>127.5</b>	105.456	105.456	105.456	105.456	105.456	105.456	105.456	105.456	105.456	105.456
<b>130.0</b>	116.864	116.864	116.864	116.864	116.864	116.864	116.864	116.864	116.864	116.864
<b>132.5</b>	129.792	129.792	129.792	129.792	129.792	129.792	129.792	129.792	129.792	129.792

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**CANDELA TABULATION - (Cont.)**

135.0	144.242	144.242	144.242	144.242	144.242	144.242	144.242	144.242	144.242	144.242
137.5	160.635	160.635	160.635	160.635	160.635	160.635	160.635	160.635	160.635	160.635
140.0	179.225	179.225	179.225	179.225	179.225	179.225	179.225	179.225	179.225	179.225
142.5	199.843	199.843	199.843	199.843	199.843	199.843	199.843	199.843	199.843	199.843
145.0	224.686	224.686	224.686	224.686	224.686	224.686	224.686	224.686	224.686	224.686
147.5	257.894	257.894	257.894	257.894	257.894	257.894	257.894	257.894	257.894	257.894
150.0	305.045	305.045	305.045	305.045	305.045	305.045	305.045	305.045	305.045	305.045
152.5	372.814	372.814	372.814	372.814	372.814	372.814	372.814	372.814	372.814	372.814
155.0	465.426	465.426	465.426	465.426	465.426	465.426	465.426	465.426	465.426	465.426
157.5	592.261	592.261	592.261	592.261	592.261	592.261	592.261	592.261	592.261	592.261
160.0	791.681	791.681	791.681	791.681	791.681	791.681	791.681	791.681	791.681	791.681
162.5	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005
165.0	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600
167.5	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500
170.0	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095
172.5	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251
175.0	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330
177.5	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375
180.0	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000

**Vert. Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387	1566.387
2.5	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545	1561.545
5.0	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405	1545.405
7.5	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809	1522.809
10.0	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336	1491.336
12.5	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951	1446.951
15.0	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426	1386.426
17.5	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691	1301.691
20.0	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255	1182.255
22.5	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469	1022.469
25.0	832.824	832.824	832.824	832.824	832.824	832.824	832.824
27.5	638.337	638.337	638.337	638.337	638.337	638.337	638.337
30.0	463.944	463.944	463.944	463.944	463.944	463.944	463.944
32.5	330.386	330.386	330.386	330.386	330.386	330.386	330.386
35.0	241.212	241.212	241.212	241.212	241.212	241.212	241.212
37.5	186.820	186.820	186.820	186.820	186.820	186.820	186.820
40.0	154.944	154.944	154.944	154.944	154.944	154.944	154.944
42.5	135.415	135.415	135.415	135.415	135.415	135.415	135.415
45.0	122.341	122.341	122.341	122.341	122.341	122.341	122.341
47.5	112.173	112.173	112.173	112.173	112.173	112.173	112.173
50.0	103.135	103.135	103.135	103.135	103.135	103.135	103.135
52.5	94.742	94.742	94.742	94.742	94.742	94.742	94.742
55.0	86.672	86.672	86.672	86.672	86.672	86.672	86.672
57.5	78.682	78.682	78.682	78.682	78.682	78.682	78.682
60.0	70.612	70.612	70.612	70.612	70.612	70.612	70.612
62.5	62.542	62.542	62.542	62.542	62.542	62.542	62.542
65.0	54.553	54.553	54.553	54.553	54.553	54.553	54.553
67.5	47.129	47.129	47.129	47.129	47.129	47.129	47.129
70.0	40.108	40.108	40.108	40.108	40.108	40.108	40.108
72.5	33.410	33.410	33.410	33.410	33.410	33.410	33.410
75.0	26.954	26.954	26.954	26.954	26.954	26.954	26.954
77.5	20.982	20.982	20.982	20.982	20.982	20.982	20.982
80.0	15.414	15.414	15.414	15.414	15.414	15.414	15.414

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82.5	10.087	10.087	10.087	10.087	10.087	10.087	10.087
85.0	5.084	5.084	5.084	5.084	5.084	5.084	5.084
87.5	0.968	0.968	0.968	0.968	0.968	0.968	0.968
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	1.014	1.014	1.014	1.014	1.014	1.014	1.014
95.0	5.239	5.239	5.239	5.239	5.239	5.239	5.239
97.5	10.478	10.478	10.478	10.478	10.478	10.478	10.478
100.0	15.886	15.886	15.886	15.886	15.886	15.886	15.886
102.5	21.717	21.717	21.717	21.717	21.717	21.717	21.717
105.0	27.970	27.970	27.970	27.970	27.970	27.970	27.970
107.5	34.730	34.730	34.730	34.730	34.730	34.730	34.730
110.0	41.912	41.912	41.912	41.912	41.912	41.912	41.912
112.5	49.517	49.517	49.517	49.517	49.517	49.517	49.517
115.0	57.629	57.629	57.629	57.629	57.629	57.629	57.629
117.5	66.502	66.502	66.502	66.502	66.502	66.502	66.502
120.0	75.797	75.797	75.797	75.797	75.797	75.797	75.797
122.5	85.261	85.261	85.261	85.261	85.261	85.261	85.261
125.0	95.147	95.147	95.147	95.147	95.147	95.147	95.147
127.5	105.456	105.456	105.456	105.456	105.456	105.456	105.456
130.0	116.864	116.864	116.864	116.864	116.864	116.864	116.864
132.5	129.792	129.792	129.792	129.792	129.792	129.792	129.792
135.0	144.242	144.242	144.242	144.242	144.242	144.242	144.242
137.5	160.635	160.635	160.635	160.635	160.635	160.635	160.635
140.0	179.225	179.225	179.225	179.225	179.225	179.225	179.225
142.5	199.843	199.843	199.843	199.843	199.843	199.843	199.843
145.0	224.686	224.686	224.686	224.686	224.686	224.686	224.686
147.5	257.894	257.894	257.894	257.894	257.894	257.894	257.894
150.0	305.045	305.045	305.045	305.045	305.045	305.045	305.045
152.5	372.814	372.814	372.814	372.814	372.814	372.814	372.814
155.0	465.426	465.426	465.426	465.426	465.426	465.426	465.426
157.5	592.261	592.261	592.261	592.261	592.261	592.261	592.261
160.0	791.681	791.681	791.681	791.681	791.681	791.681	791.681
162.5	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005	1123.005
165.0	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600	1588.600
167.5	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500	2112.500
170.0	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095	2578.095
172.5	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251	2915.251
175.0	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330	3138.330
177.5	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375	3274.375
180.0	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000	3318.000

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Zone	Lumens	%Lamp	%Fixt
0-20	529.26	N.A.	19.60
0-30	903.06	N.A.	33.40
0-40	1067.08	N.A.	39.50
0-60	1240.71	N.A.	45.90
0-80	1323.77	N.A.	48.90
0-90	1330.25	N.A.	49.20
10-90	1184.41	N.A.	43.80
20-40	537.82	N.A.	19.90
20-50	633.90	N.A.	23.40
40-70	227.92	N.A.	8.40
60-80	83.06	N.A.	3.10
70-80	28.76	N.A.	1.10
80-90	6.48	N.A.	0.20
90-110	36.58	N.A.	1.40
90-120	94.06	N.A.	3.50
90-130	179.43	N.A.	6.60
90-150	435.30	N.A.	16.10
90-180	1374.39	N.A.	50.80
110-180	1337.81	N.A.	49.50
0-180	2704.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	145.84
10-20	383.42
20-30	373.80
30-40	164.02
40-50	96.08
50-60	77.54
60-70	54.30
70-80	28.76
80-90	6.48
90-100	6.71
100-110	29.87
110-120	57.48
120-130	85.37
130-140	112.16
140-150	143.71
150-160	222.65
160-170	434.37
170-180	282.07

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CRDI-L12-835U-L12-835D-XXX-DIM1-UNV-LM-CSU-LW-WHD-WM\_.IES

## 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	55	55	55	49
1	99	96	92	90	92	89	86	83	75	73	72	63	62	61	52	51	50	45
2	92	86	81	77	85	80	75	72	68	65	63	58	56	54	48	47	45	41
3	86	78	72	67	79	72	67	63	62	59	55	53	51	48	45	43	41	38
4	80	71	64	59	74	66	60	56	57	53	50	49	46	44	42	40	38	35
5	74	64	58	53	69	60	54	50	53	48	45	46	43	40	39	37	35	32
6	70	59	52	47	65	56	50	45	49	44	41	43	39	37	37	35	33	30
7	65	55	48	43	61	52	45	41	46	41	38	40	37	34	35	32	30	28
8	61	51	44	39	57	48	42	38	43	38	35	38	34	32	33	30	29	26
9	58	47	41	36	54	45	39	35	40	35	32	35	32	29	31	29	27	25
10	55	44	38	34	51	42	36	32	38	33	30	33	30	28	30	27	25	23

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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	17.4	18.1	18.4	19.1	20.4	17.4	18.1	18.4	19.1	20.4
	3H	18.9	19.5	19.9	20.5	21.8	18.9	19.5	19.9	20.5	21.8
	4H	19.4	20.0	20.4	21.0	22.3	19.4	20.0	20.4	21.0	22.3
	6H	19.7	20.3	20.7	21.3	22.6	19.7	20.3	20.7	21.3	22.6
	8H	19.8	20.3	20.8	21.3	22.7	19.8	20.3	20.8	21.3	22.7
	12H	19.8	20.3	20.8	21.3	22.7	19.8	20.3	20.8	21.3	22.7

### UGR Viewed Endwise

4H	2H	17.8	18.4	18.9	19.4	20.8	17.8	18.4	18.9	19.4	20.8
	3H	19.5	20.0	20.5	21.0	22.4	19.5	20.0	20.5	21.0	22.4
	4H	20.1	20.6	21.2	21.6	23.0	20.1	20.6	21.2	21.6	23.0
	6H	20.6	21.0	21.6	22.0	23.4	20.6	21.0	21.6	22.0	23.4
	8H	20.7	21.1	21.7	22.1	23.5	20.7	21.1	21.7	22.1	23.5
	12H	20.7	21.1	21.8	22.1	23.5	20.7	21.1	21.8	22.1	23.5
8H	4H	20.3	20.7	21.4	21.7	23.1	20.3	20.7	21.4	21.7	23.1
	6H	20.9	21.2	21.9	22.2	23.6	20.9	21.2	21.9	22.2	23.6
	8H	21.0	21.3	22.1	22.4	23.8	21.0	21.3	22.1	22.4	23.8
	12H	21.1	21.4	22.2	22.4	23.8	21.1	21.4	22.2	22.4	23.8
12H	4H	20.3	20.6	21.3	21.7	23.0	20.3	20.6	21.3	21.7	23.0
	6H	20.9	21.1	21.9	22.2	23.6	20.9	21.1	21.9	22.2	23.6
	8H	21.1	21.3	22.2	22.4	23.8	21.1	21.3	22.2	22.4	23.8

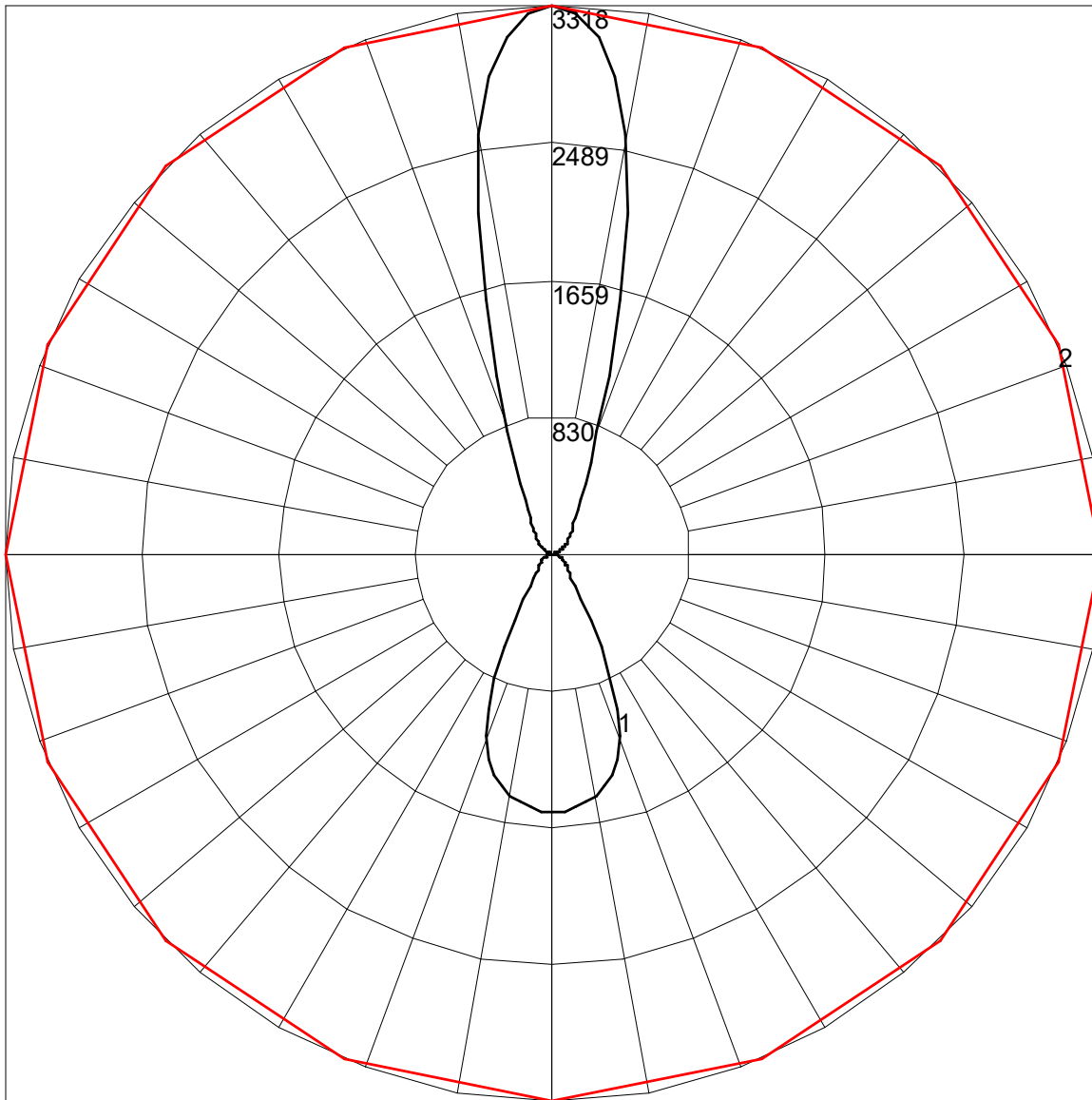
Maximum UGR = 23.8



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## POLAR GRAPH



Maximum Candela = 3318 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.)