



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-LW-CSU-OM-CSD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 AND #12326812.04

[TESTLAB]

[ISSUE DATE] 16-FEB-2021

[MANUFAC] WILLIAMS INDOOR

[MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO

[LUMCAT] 8CRDI-TL-L20-835U-L20-835D-xxx-DIM1-UNV-LW-CSU-OM-CSD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, clear uplight glass lens enclosure, no downlight enclosure

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

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[_SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3550
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	38.0077
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 w/ Sides
Luminous Length (0-180)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	407	407	407
55	111	111	111
65	31	31	31
75	8	8	8
85	2	2	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>	<u>202.5</u>
0.0	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000
2.5	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000
5.0	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000
7.5	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000
10.0	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000
12.5	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000
15.0	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000
17.5	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000
20.0	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000
22.5	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000
25.0	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000
27.5	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000
30.0	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000
32.5	711.200	711.200	711.200	711.200	711.200	711.200	711.200	711.200	711.200	711.200
35.0	395.500	395.500	395.500	395.500	395.500	395.500	395.500	395.500	395.500	395.500
37.5	172.500	172.500	172.500	172.500	172.500	172.500	172.500	172.500	172.500	172.500
40.0	115.800	115.800	115.800	115.800	115.800	115.800	115.800	115.800	115.800	115.800
42.5	65.300	65.300	65.300	65.300	65.300	65.300	65.300	65.300	65.300	65.300
45.0	46.200	46.200	46.200	46.200	46.200	46.200	46.200	46.200	46.200	46.200
47.5	35.800	35.800	35.800	35.800	35.800	35.800	35.800	35.800	35.800	35.800
50.0	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800	26.800
52.5	19.400	19.400	19.400	19.400	19.400	19.400	19.400	19.400	19.400	19.400
55.0	13.800	13.800	13.800	13.800	13.800	13.800	13.800	13.800	13.800	13.800
57.5	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
60.0	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300
62.5	5.400	5.400	5.400	5.400	5.400	5.400	5.400	5.400	5.400	5.400
65.0	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
67.5	2.900	2.900	2.900	2.900	2.900	2.900	2.900	2.900	2.900	2.900
70.0	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200
72.5	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600
75.0	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100
77.5	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
80.0	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
82.5	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
85.0	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
87.5	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
90.0	3.804	3.804	3.804	3.804	3.804	3.804	3.804	3.804	3.804	3.804
92.5	5.704	5.704	5.704	5.704	5.704	5.704	5.704	5.704	5.704	5.704
95.0	9.967	9.967	9.967	9.967	9.967	9.967	9.967	9.967	9.967	9.967
97.5	16.905	16.905	16.905	16.905	16.905	16.905	16.905	16.905	16.905	16.905
100.0	25.166	25.166	25.166	25.166	25.166	25.166	25.166	25.166	25.166	25.166
102.5	33.839	33.839	33.839	33.839	33.839	33.839	33.839	33.839	33.839	33.839
105.0	43.189	43.189	43.189	43.189	43.189	43.189	43.189	43.189	43.189	43.189
107.5	53.743	53.743	53.743	53.743	53.743	53.743	53.743	53.743	53.743	53.743
110.0	66.032	66.032	66.032	66.032	66.032	66.032	66.032	66.032	66.032	66.032
112.5	79.850	79.850	79.850	79.850	79.850	79.850	79.850	79.850	79.850	79.850
115.0	95.491	95.491	95.491	95.491	95.491	95.491	95.491	95.491	95.491	95.491
117.5	113.014	113.014	113.014	113.014	113.014	113.014	113.014	113.014	113.014	113.014
120.0	132.623	132.623	132.623	132.623	132.623	132.623	132.623	132.623	132.623	132.623
122.5	154.438	154.438	154.438	154.438	154.438	154.438	154.438	154.438	154.438	154.438
125.0	178.546	178.546	178.546	178.546	178.546	178.546	178.546	178.546	178.546	178.546
127.5	204.271	204.271	204.271	204.271	204.271	204.271	204.271	204.271	204.271	204.271
130.0	231.025	231.025	231.025	231.025	231.025	231.025	231.025	231.025	231.025	231.025
132.5	257.926	257.926	257.926	257.926	257.926	257.926	257.926	257.926	257.926	257.926

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CANDELA TABULATION - (Cont.)

135.0	284.798	284.798	284.798	284.798	284.798	284.798	284.798	284.798	284.798	284.798
137.5	312.816	312.816	312.816	312.816	312.816	312.816	312.816	312.816	312.816	312.816
140.0	345.156	345.156	345.156	345.156	345.156	345.156	345.156	345.156	345.156	345.156
142.5	386.610	386.610	386.610	386.610	386.610	386.610	386.610	386.610	386.610	386.610
145.0	442.470	442.470	442.470	442.470	442.470	442.470	442.470	442.470	442.470	442.470
147.5	514.794	514.794	514.794	514.794	514.794	514.794	514.794	514.794	514.794	514.794
150.0	604.464	604.464	604.464	604.464	604.464	604.464	604.464	604.464	604.464	604.464
152.5	697.956	697.956	697.956	697.956	697.956	697.956	697.956	697.956	697.956	697.956
155.0	792.918	792.918	792.918	792.918	792.918	792.918	792.918	792.918	792.918	792.918
157.5	877.590	877.590	877.590	877.590	877.590	877.590	877.590	877.590	877.590	877.590
160.0	943.740	943.740	943.740	943.740	943.740	943.740	943.740	943.740	943.740	943.740
162.5	988.134	988.134	988.134	988.134	988.134	988.134	988.134	988.134	988.134	988.134
165.0	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418
167.5	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942
170.0	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586
172.5	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172
175.0	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170
177.5	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522
180.0	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816

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	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000	4013.000
2.5	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000	4062.000
5.0	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000	3972.000
7.5	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000	3572.000
10.0	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000	2993.000
12.5	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000	2604.000
15.0	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000	2325.000
17.5	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000	2106.000
20.0	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000	1912.000
22.5	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000	1676.000
25.0	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000	1412.000
27.5	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000	1177.000
30.0	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000	1003.000
32.5	711.200	711.200	711.200	711.200	711.200	711.200	711.200
35.0	395.500	395.500	395.500	395.500	395.500	395.500	395.500
37.5	172.500	172.500	172.500	172.500	172.500	172.500	172.500
40.0	115.800	115.800	115.800	115.800	115.800	115.800	115.800
42.5	65.300	65.300	65.300	65.300	65.300	65.300	65.300
45.0	46.200	46.200	46.200	46.200	46.200	46.200	46.200
47.5	35.800	35.800	35.800	35.800	35.800	35.800	35.800
50.0	26.800	26.800	26.800	26.800	26.800	26.800	26.800
52.5	19.400	19.400	19.400	19.400	19.400	19.400	19.400
55.0	13.800	13.800	13.800	13.800	13.800	13.800	13.800
57.5	10.000	10.000	10.000	10.000	10.000	10.000	10.000
60.0	7.300	7.300	7.300	7.300	7.300	7.300	7.300
62.5	5.400	5.400	5.400	5.400	5.400	5.400	5.400
65.0	4.000	4.000	4.000	4.000	4.000	4.000	4.000
67.5	2.900	2.900	2.900	2.900	2.900	2.900	2.900
70.0	2.200	2.200	2.200	2.200	2.200	2.200	2.200
72.5	1.600	1.600	1.600	1.600	1.600	1.600	1.600
75.0	1.100	1.100	1.100	1.100	1.100	1.100	1.100
77.5	0.800	0.800	0.800	0.800	0.800	0.800	0.800
80.0	0.600	0.600	0.600	0.600	0.600	0.600	0.600

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82.5	0.400	0.400	0.400	0.400	0.400	0.400	0.400
85.0	0.300	0.300	0.300	0.300	0.300	0.300	0.300
87.5	0.200	0.200	0.200	0.200	0.200	0.200	0.200
90.0	3.804	3.804	3.804	3.804	3.804	3.804	3.804
92.5	5.704	5.704	5.704	5.704	5.704	5.704	5.704
95.0	9.967	9.967	9.967	9.967	9.967	9.967	9.967
97.5	16.905	16.905	16.905	16.905	16.905	16.905	16.905
100.0	25.166	25.166	25.166	25.166	25.166	25.166	25.166
102.5	33.839	33.839	33.839	33.839	33.839	33.839	33.839
105.0	43.189	43.189	43.189	43.189	43.189	43.189	43.189
107.5	53.743	53.743	53.743	53.743	53.743	53.743	53.743
110.0	66.032	66.032	66.032	66.032	66.032	66.032	66.032
112.5	79.850	79.850	79.850	79.850	79.850	79.850	79.850
115.0	95.491	95.491	95.491	95.491	95.491	95.491	95.491
117.5	113.014	113.014	113.014	113.014	113.014	113.014	113.014
120.0	132.623	132.623	132.623	132.623	132.623	132.623	132.623
122.5	154.438	154.438	154.438	154.438	154.438	154.438	154.438
125.0	178.546	178.546	178.546	178.546	178.546	178.546	178.546
127.5	204.271	204.271	204.271	204.271	204.271	204.271	204.271
130.0	231.025	231.025	231.025	231.025	231.025	231.025	231.025
132.5	257.926	257.926	257.926	257.926	257.926	257.926	257.926
135.0	284.798	284.798	284.798	284.798	284.798	284.798	284.798
137.5	312.816	312.816	312.816	312.816	312.816	312.816	312.816
140.0	345.156	345.156	345.156	345.156	345.156	345.156	345.156
142.5	386.610	386.610	386.610	386.610	386.610	386.610	386.610
145.0	442.470	442.470	442.470	442.470	442.470	442.470	442.470
147.5	514.794	514.794	514.794	514.794	514.794	514.794	514.794
150.0	604.464	604.464	604.464	604.464	604.464	604.464	604.464
152.5	697.956	697.956	697.956	697.956	697.956	697.956	697.956
155.0	792.918	792.918	792.918	792.918	792.918	792.918	792.918
157.5	877.590	877.590	877.590	877.590	877.590	877.590	877.590
160.0	943.740	943.740	943.740	943.740	943.740	943.740	943.740
162.5	988.134	988.134	988.134	988.134	988.134	988.134	988.134
165.0	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418	1013.418
167.5	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942	1026.942
170.0	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586	1034.586
172.5	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172	1040.172
175.0	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170	1045.170
177.5	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522	1047.522
180.0	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816	1047.816

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Zone	Lumens	%Lamp	%Fixt
0-20	1002.85	N.A.	28.20
0-30	1652.24	N.A.	46.50
0-40	1929.18	N.A.	54.30
0-60	1984.03	N.A.	55.90
0-80	1989.52	N.A.	56.00
0-90	1990.37	N.A.	56.10
10-90	1644.74	N.A.	46.30
20-40	926.33	N.A.	26.10
20-50	967.83	N.A.	27.30
40-70	59.05	N.A.	1.70
60-80	5.49	N.A.	0.20
70-80	1.29	N.A.	0.00
80-90	0.85	N.A.	0.00
90-110	59.30	N.A.	1.70
90-120	155.08	N.A.	4.40
90-130	315.51	N.A.	8.90
90-150	818.21	N.A.	23.00
90-180	1560.04	N.A.	43.90
110-180	1500.74	N.A.	42.30
0-180	3550.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	345.63
10-20	657.23
20-30	649.39
30-40	276.94
40-50	41.51
50-60	13.35
60-70	4.20
70-80	1.29
80-90	0.85
90-100	12.81
100-110	46.49
110-120	95.78
120-130	160.43
130-140	220.23
140-150	282.46
150-160	358.94
160-170	283.48
170-180	99.40

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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	102	99	96	93	95	92	90	88	80	79	77	69	68	67	59	58	58	53
2	96	90	86	82	89	85	81	78	75	72	70	65	63	62	56	55	54	50
3	90	83	78	73	84	78	74	70	69	66	63	61	59	57	54	52	51	47
4	85	77	71	66	79	73	67	63	65	61	58	58	55	53	51	49	48	45
5	80	71	65	60	75	67	62	58	61	57	54	54	52	49	49	47	45	42
6	75	66	60	55	71	63	58	54	57	53	50	52	48	46	46	44	42	40
7	71	62	56	51	67	59	54	50	54	50	46	49	46	43	44	42	40	38
8	68	58	52	48	64	55	50	46	51	47	43	46	43	41	42	40	38	36
9	64	54	49	44	61	52	47	43	48	44	41	44	41	39	40	38	36	34
10	61	51	46	42	58	49	44	41	46	41	39	42	39	37	39	36	34	33

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-LW-CSU-OM-CSD-WM_.IES

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

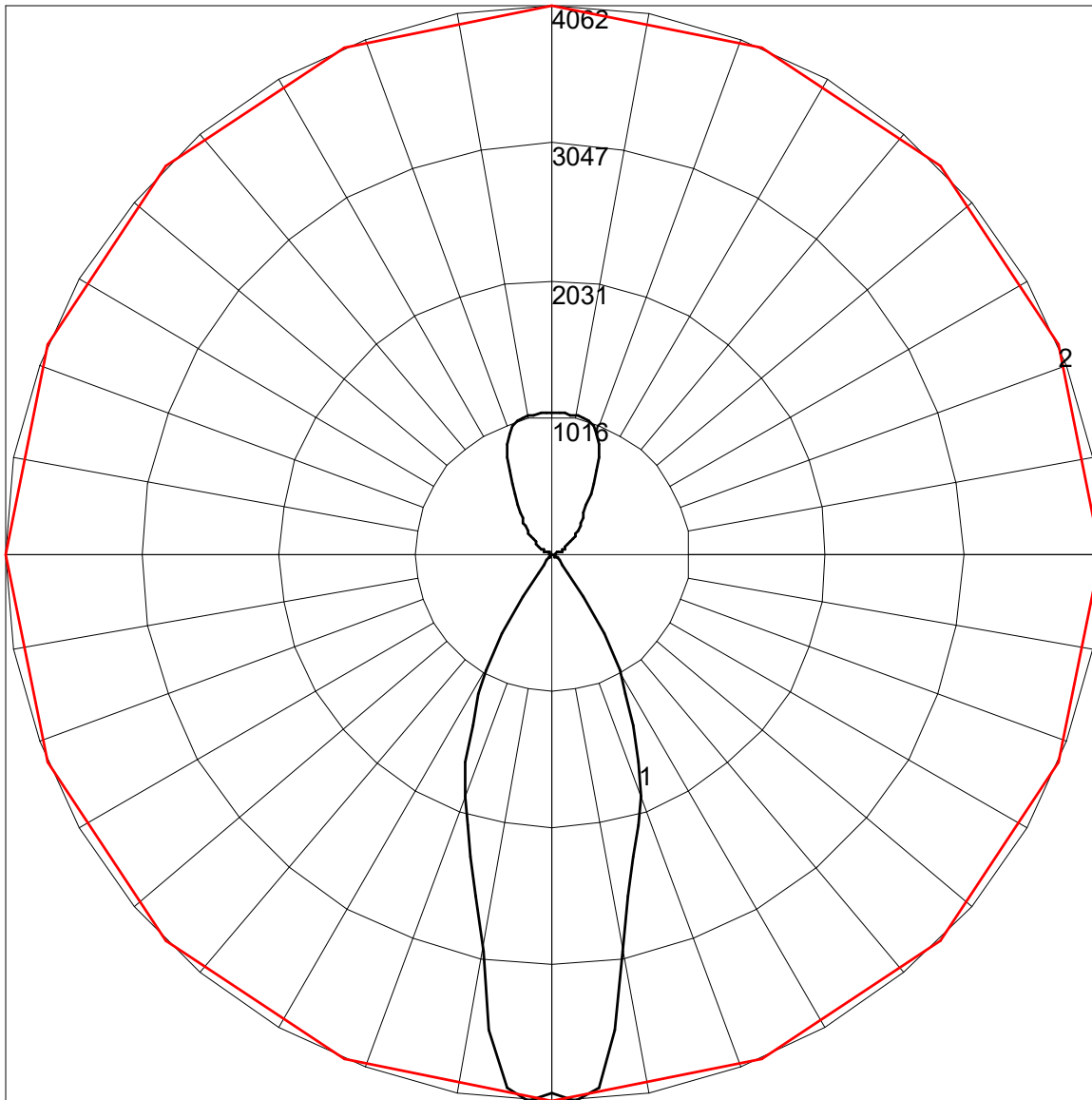
X=2H	Y=2H	4.4	4.4	4.4	4.4	4.4	UGR Viewed Endwise				
	3H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	12H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
4H	2H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	3H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	12H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8H	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	12H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
12H	4H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	6H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	8H	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

Maximum UGR = 4.4

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-LW-CSU-OM-CSD-WM_.IES

POLAR GRAPH



Maximum Candela = 4062 Located At Horizontal Angle = 0, Vertical Angle = 2.5

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)