



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L20-835-xxx-DIM-UNV-LW-WH-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[_SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1562
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	19.1038
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	25958	25958	25958
55	21611	21611	21611
65	16418	16418	16418
75	11906	11906	11906
85	7759	7759	7759

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION

	<u>0</u>
0.0	993.30
0.5	993.10
1.0	992.30
1.5	991.10
2.0	989.60
2.5	987.60
3.0	985.60
3.5	983.30
4.0	981.20
4.5	979.10
5.0	977.60
5.5	976.20
6.0	974.90
6.5	973.60
7.0	972.20
7.5	970.90
8.0	969.60
8.5	968.40
9.0	967.20
9.5	966.20
10.0	965.20
10.5	964.40
11.0	963.70
11.5	963.30
12.0	962.60
12.5	961.90
13.0	960.90
13.5	959.60
14.0	958.00
14.5	956.20
15.0	954.30
15.5	951.90
16.0	949.30
16.5	946.70
17.0	944.10
17.5	941.40
18.0	938.50
18.5	935.20
19.0	931.50
19.5	927.40
20.0	922.70
20.5	917.60
21.0	911.30
21.5	903.80
22.0	895.30
22.5	885.70
23.0	875.20
23.5	863.80
24.0	851.20
24.5	837.60
25.0	822.90
25.5	807.60
26.0	791.30
26.5	774.30

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

27.0	756.20
27.5	737.60
28.0	718.00
28.5	697.30
29.0	675.80
29.5	653.20
30.0	630.00
30.5	606.10
31.0	582.20
31.5	558.10
32.0	534.70
32.5	512.30
33.0	490.80
33.5	470.70
34.0	452.20
34.5	435.40
35.0	420.40
35.5	406.60
36.0	394.50
36.5	383.40
37.0	373.50
37.5	364.60
38.0	356.50
38.5	349.10
39.0	342.10
39.5	335.80
40.0	329.70
40.5	324.00
41.0	318.70
41.5	313.50
42.0	308.50
42.5	303.90
43.0	299.20
43.5	294.60
44.0	290.10
44.5	285.70
45.0	281.20
45.5	276.90
46.0	272.50
46.5	268.10
47.0	263.60
47.5	259.20
48.0	254.70
48.5	250.20
49.0	245.70
49.5	241.00
50.0	236.50
50.5	231.90
51.0	227.30
51.5	222.60
52.0	217.90
52.5	213.20
53.0	208.50
53.5	203.80
54.0	199.30
54.5	194.70

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

55.0	189.90
55.5	185.20
56.0	180.50
56.5	176.10
57.0	171.70
57.5	167.10
58.0	162.50
58.5	158.00
59.0	153.60
59.5	149.20
60.0	145.00
60.5	140.80
61.0	136.70
61.5	132.60
62.0	128.70
62.5	124.80
63.0	121.00
63.5	117.20
64.0	113.50
64.5	109.90
65.0	106.30
65.5	102.80
66.0	99.31
66.5	95.88
67.0	92.49
67.5	89.17
68.0	85.91
68.5	82.64
69.0	79.47
69.5	76.33
70.0	73.28
70.5	70.33
71.0	67.44
71.5	64.64
72.0	61.94
72.5	59.32
73.0	56.77
73.5	54.27
74.0	51.87
74.5	49.52
75.0	47.21
75.5	44.98
76.0	42.79
76.5	40.64
77.0	38.55
77.5	36.50
78.0	34.51
78.5	32.56
79.0	30.65
79.5	28.81
80.0	26.98
80.5	25.21
81.0	23.46
81.5	21.72
82.0	20.02
82.5	18.33

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

83.0	16.68
83.5	15.06
84.0	13.46
84.5	11.89
85.0	10.36
85.5	8.88
86.0	7.45
86.5	6.07
87.0	4.73
87.5	3.61
88.0	2.76
88.5	2.02
89.0	1.40
89.5	0.88
90.0	0.56
90.5	0.00
91.0	0.00
91.5	0.00
92.0	0.00
92.5	0.00
93.0	0.00
93.5	0.00
94.0	0.00
94.5	0.00
95.0	0.00
95.5	0.00
96.0	0.00
96.5	0.00
97.0	0.00
97.5	0.00
98.0	0.00
98.5	0.00
99.0	0.00
99.5	0.00
100.0	0.00
100.5	0.00
101.0	0.00
101.5	0.00
102.0	0.00
102.5	0.00
103.0	0.00
103.5	0.00
104.0	0.00
104.5	0.00
105.0	0.00
105.5	0.00
106.0	0.00
106.5	0.00
107.0	0.00
107.5	0.00
108.0	0.00
108.5	0.00
109.0	0.00
109.5	0.00
110.0	0.00
110.5	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

111.0	0.00
111.5	0.00
112.0	0.00
112.5	0.00
113.0	0.00
113.5	0.00
114.0	0.00
114.5	0.00
115.0	0.00
115.5	0.00
116.0	0.00
116.5	0.00
117.0	0.00
117.5	0.00
118.0	0.00
118.5	0.00
119.0	0.00
119.5	0.00
120.0	0.00
120.5	0.00
121.0	0.00
121.5	0.00
122.0	0.00
122.5	0.00
123.0	0.00
123.5	0.00
124.0	0.00
124.5	0.00
125.0	0.00
125.5	0.00
126.0	0.00
126.5	0.00
127.0	0.00
127.5	0.00
128.0	0.00
128.5	0.00
129.0	0.00
129.5	0.00
130.0	0.00
130.5	0.00
131.0	0.00
131.5	0.00
132.0	0.00
132.5	0.00
133.0	0.00
133.5	0.00
134.0	0.00
134.5	0.00
135.0	0.00
135.5	0.00
136.0	0.00
136.5	0.00
137.0	0.00
137.5	0.00
138.0	0.00
138.5	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

139.0	0.00
139.5	0.00
140.0	0.00
140.5	0.00
141.0	0.00
141.5	0.00
142.0	0.00
142.5	0.00
143.0	0.00
143.5	0.00
144.0	0.00
144.5	0.00
145.0	0.00
145.5	0.00
146.0	0.00
146.5	0.00
147.0	0.00
147.5	0.00
148.0	0.00
148.5	0.00
149.0	0.00
149.5	0.00
150.0	0.00
150.5	0.00
151.0	0.00
151.5	0.00
152.0	0.00
152.5	0.00
153.0	0.00
153.5	0.00
154.0	0.00
154.5	0.00
155.0	0.00
155.5	0.00
156.0	0.00
156.5	0.00
157.0	0.00
157.5	0.00
158.0	0.00
158.5	0.00
159.0	0.00
159.5	0.00
160.0	0.00
160.5	0.00
161.0	0.00
161.5	0.00
162.0	0.00
162.5	0.00
163.0	0.00
163.5	0.00
164.0	0.00
164.5	0.00
165.0	0.00
165.5	0.00
166.0	0.00
166.5	0.00

CANDELA TABULATION - (Cont.)

167.0	0.00
167.5	0.00
168.0	0.00
168.5	0.00
169.0	0.00
169.5	0.00
170.0	0.00
170.5	0.00
171.0	0.00
171.5	0.00
172.0	0.00
172.5	0.00
173.0	0.00
173.5	0.00
174.0	0.00
174.5	0.00
175.0	0.00
175.5	0.00
176.0	0.00
176.5	0.00
177.0	0.00
177.5	0.00
178.0	0.00
178.5	0.00
179.0	0.00
179.5	0.00
180.0	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	361.83	N.A.	23.20
0-30	731.40	N.A.	46.80
0-40	1005.44	N.A.	64.40
0-60	1392.38	N.A.	89.20
0-80	1549.11	N.A.	99.20
0-90	1561.5	N.A.	100.00
10-90	1468.55	N.A.	94.00
20-40	643.61	N.A.	41.20
20-50	860.77	N.A.	55.10
40-70	492.90	N.A.	31.60
60-80	156.73	N.A.	10.00
70-80	50.77	N.A.	3.30
80-90	12.39	N.A.	0.80
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1561.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	92.95
10-20	268.87
20-30	369.57
30-40	274.04
40-50	217.15
50-60	169.79
60-70	105.96
70-80	50.77
80-90	12.39
90-100	0.02
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.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	20.6	22.0	21.0	22.3	22.6	20.6	22.0	21.0	22.3	22.6
	3H	21.8	23.1	22.2	23.4	23.7	21.8	23.1	22.2	23.4	23.7
	4H	22.2	23.4	22.6	23.7	24.1	22.2	23.4	22.6	23.7	24.1
	6H	22.5	23.5	22.9	23.9	24.3	22.5	23.5	22.9	23.9	24.3
	8H	22.6	23.6	23.0	24.0	24.4	22.6	23.6	23.0	24.0	24.4
	12H	22.6	23.6	23.0	23.9	24.4	22.6	23.6	23.0	23.9	24.4

UGR Viewed Endwise

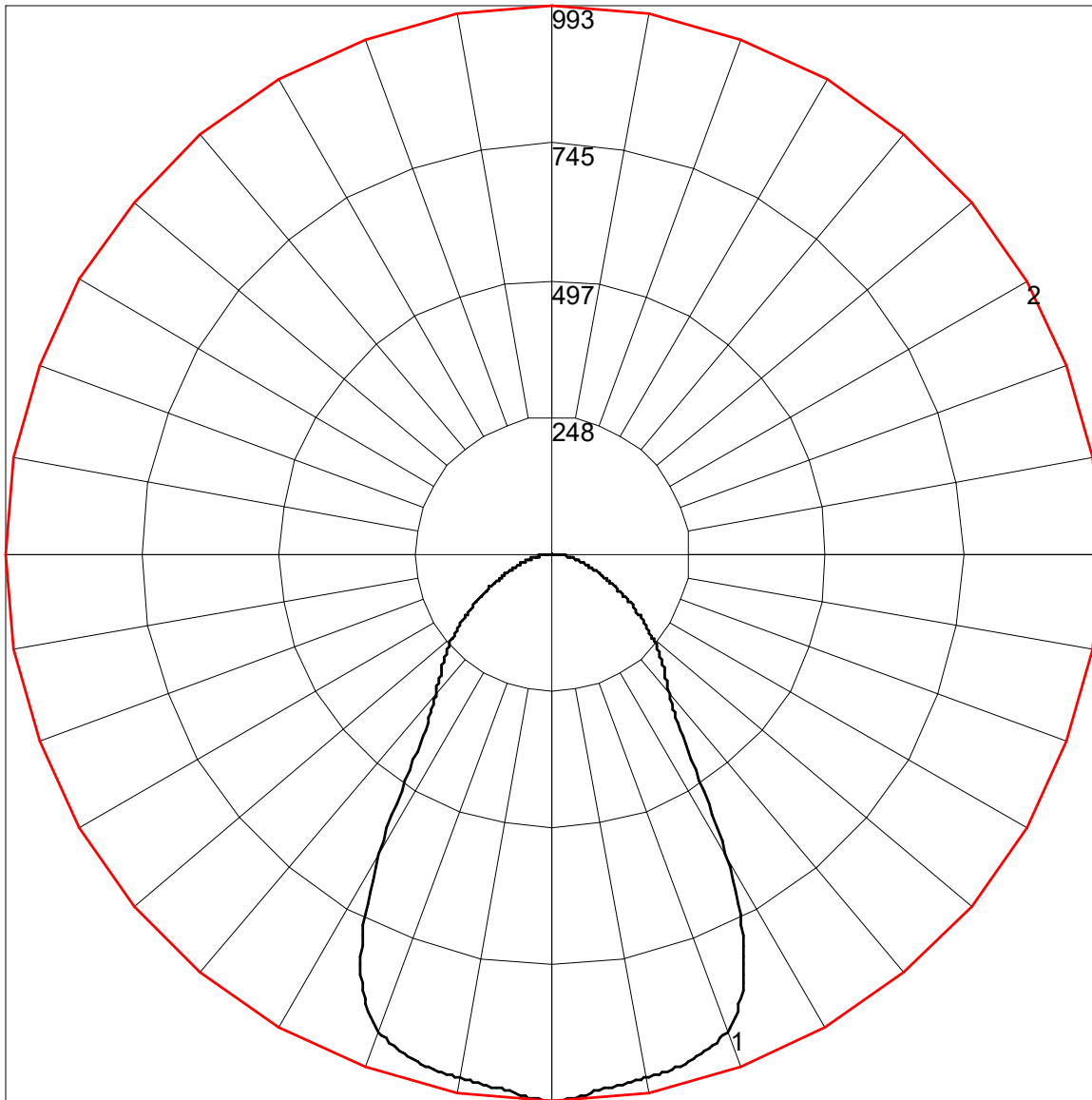
4H	2H	21.0	22.2	21.4	22.5	22.9	21.0	22.2	21.4	22.5	22.9
	3H	22.4	23.4	22.8	23.8	24.2	22.4	23.4	22.8	23.8	24.2
	4H	22.9	23.8	23.4	24.2	24.6	22.9	23.8	23.4	24.2	24.6
	6H	23.3	24.0	23.8	24.5	24.9	23.3	24.0	23.8	24.5	24.9
	8H	23.4	24.1	23.8	24.5	25.0	23.4	24.1	23.8	24.5	25.0
	12H	23.5	24.1	23.9	24.6	25.0	23.5	24.1	23.9	24.6	25.0

8H	4H	23.1	23.8	23.5	24.2	24.7	23.1	23.8	23.5	24.2	24.7
	6H	23.5	24.1	24.0	24.6	25.1	23.5	24.1	24.0	24.6	25.1
	8H	23.7	24.2	24.2	24.7	25.2	23.7	24.2	24.2	24.7	25.2
	12H	23.8	24.3	24.3	24.8	25.3	23.8	24.3	24.3	24.8	25.3

12H	4H	23.1	23.7	23.6	24.2	24.6	23.1	23.7	23.6	24.2	24.6
	6H	23.6	24.1	24.1	24.5	25.1	23.6	24.1	24.1	24.5	25.1
	8H	23.8	24.2	24.3	24.7	25.3	23.8	24.2	24.3	24.7	25.3

Maximum UGR = 25.3

POLAR GRAPH



Maximum Candela = 993.3 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.)