



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-P16-8TW-XXX-POE-LW-WH-XX_3000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 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-P16-8TW-xxx-POE x-LW-WH-xx
 [LUMINAIRE] 8" DIA. SURFACE CYLINDER
 [LAMP] One white LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1120
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	12.3
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	18613	18613	18613
55	15496	15496	15496
65	11772	11772	11772
75	8537	8537	8537
85	5563	5563	5563

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CANDELA TABULATION

	<u>0</u>
0.0	712.225
0.5	712.082
1.0	711.508
1.5	710.648
2.0	709.572
2.5	708.138
3.0	706.704
3.5	705.055
4.0	703.549
4.5	702.044
5.0	700.968
5.5	699.964
6.0	699.032
6.5	698.100
7.0	697.096
7.5	696.164
8.0	695.232
8.5	694.371
9.0	693.511
9.5	692.794
10.0	692.077
10.5	691.503
11.0	691.001
11.5	690.715
12.0	690.213
12.5	689.711
13.0	688.994
13.5	688.062
14.0	686.914
14.5	685.624
15.0	684.261
15.5	682.540
16.0	680.676
16.5	678.812
17.0	676.948
17.5	675.012
18.0	672.932
18.5	670.566
19.0	667.913
19.5	664.973
20.0	661.603
20.5	657.946
21.0	653.429
21.5	648.051
22.0	641.957
22.5	635.073
23.0	627.544
23.5	619.370
24.0	610.336
24.5	600.584
25.0	590.044
25.5	579.073
26.0	567.385
26.5	555.196

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-P16-8TW-XXX-POE-LW-WH-XX_3000K.IES****CANDELA TABULATION - (Cont.)**

27.0	542.218
27.5	528.881
28.0	514.827
28.5	499.985
29.0	484.569
29.5	468.364
30.0	451.729
30.5	434.592
31.0	417.455
31.5	400.174
32.0	383.396
32.5	367.334
33.0	351.918
33.5	337.506
34.0	324.241
34.5	312.195
35.0	301.439
35.5	291.544
36.0	282.868
36.5	274.909
37.0	267.811
37.5	261.429
38.0	255.621
38.5	250.315
39.0	245.296
39.5	240.779
40.0	236.405
40.5	232.318
41.0	228.517
41.5	224.789
42.0	221.204
42.5	217.905
43.0	214.535
43.5	211.237
44.0	208.010
44.5	204.855
45.0	201.629
45.5	198.545
46.0	195.391
46.5	192.236
47.0	189.009
47.5	185.854
48.0	182.627
48.5	179.401
49.0	176.174
49.5	172.804
50.0	169.577
50.5	166.279
51.0	162.981
51.5	159.611
52.0	156.241
52.5	152.871
53.0	149.501
53.5	146.131
54.0	142.904
54.5	139.606

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55.0	136.164
55.5	132.794
56.0	129.424
56.5	126.269
57.0	123.114
57.5	119.816
58.0	116.517
58.5	113.291
59.0	110.136
59.5	106.981
60.0	103.969
60.5	100.958
61.0	98.018
61.5	95.078
62.0	92.282
62.5	89.485
63.0	86.761
63.5	84.036
64.0	81.383
64.5	78.802
65.0	76.220
65.5	73.711
66.0	71.208
66.5	68.749
67.0	66.318
67.5	63.938
68.0	61.600
68.5	59.255
69.0	56.982
69.5	54.731
70.0	52.544
70.5	50.429
71.0	48.356
71.5	46.349
72.0	44.413
72.5	42.534
73.0	40.706
73.5	38.913
74.0	37.192
74.5	35.507
75.0	33.851
75.5	32.252
76.0	30.682
76.5	29.140
77.0	27.641
77.5	26.172
78.0	24.745
78.5	23.346
79.0	21.977
79.5	20.658
80.0	19.345
80.5	18.076
81.0	16.822
81.5	15.574
82.0	14.355
82.5	13.143

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83.0	11.960
83.5	10.798
84.0	9.651
84.5	8.525
85.0	7.428
85.5	6.367
86.0	5.342
86.5	4.352
87.0	3.392
87.5	2.588
88.0	1.979
88.5	1.448
89.0	1.004
89.5	0.631
90.0	0.402
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
102.5	0.000
103.0	0.000
103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-P16-8TW-XXX-POE-LW-WH-XX_3000K.IES****CANDELA TABULATION - (Cont.)**

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
114.5	0.000
115.0	0.000
115.5	0.000
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
135.0	0.000
135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

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139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
142.5	0.000
143.0	0.000
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
161.5	0.000
162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

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CANDELA TABULATION - (Cont.)

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	259.44	N.A.	23.20
0-30	524.43	N.A.	46.80
0-40	720.93	N.A.	64.40
0-60	998.38	N.A.	89.20
0-80	1110.76	N.A.	99.20
0-90	1119.64	N.A.	100.00
10-90	1052.99	N.A.	94.00
20-40	461.49	N.A.	41.20
20-50	617.19	N.A.	55.10
40-70	353.42	N.A.	31.60
60-80	112.38	N.A.	10.00
70-80	36.40	N.A.	3.30
80-90	8.88	N.A.	0.80
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1119.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	66.65
10-20	192.79
20-30	264.99
30-40	196.50
40-50	155.70
50-60	121.74
60-70	75.98
70-80	36.40
80-90	8.88
90-100	0.01
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

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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	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

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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

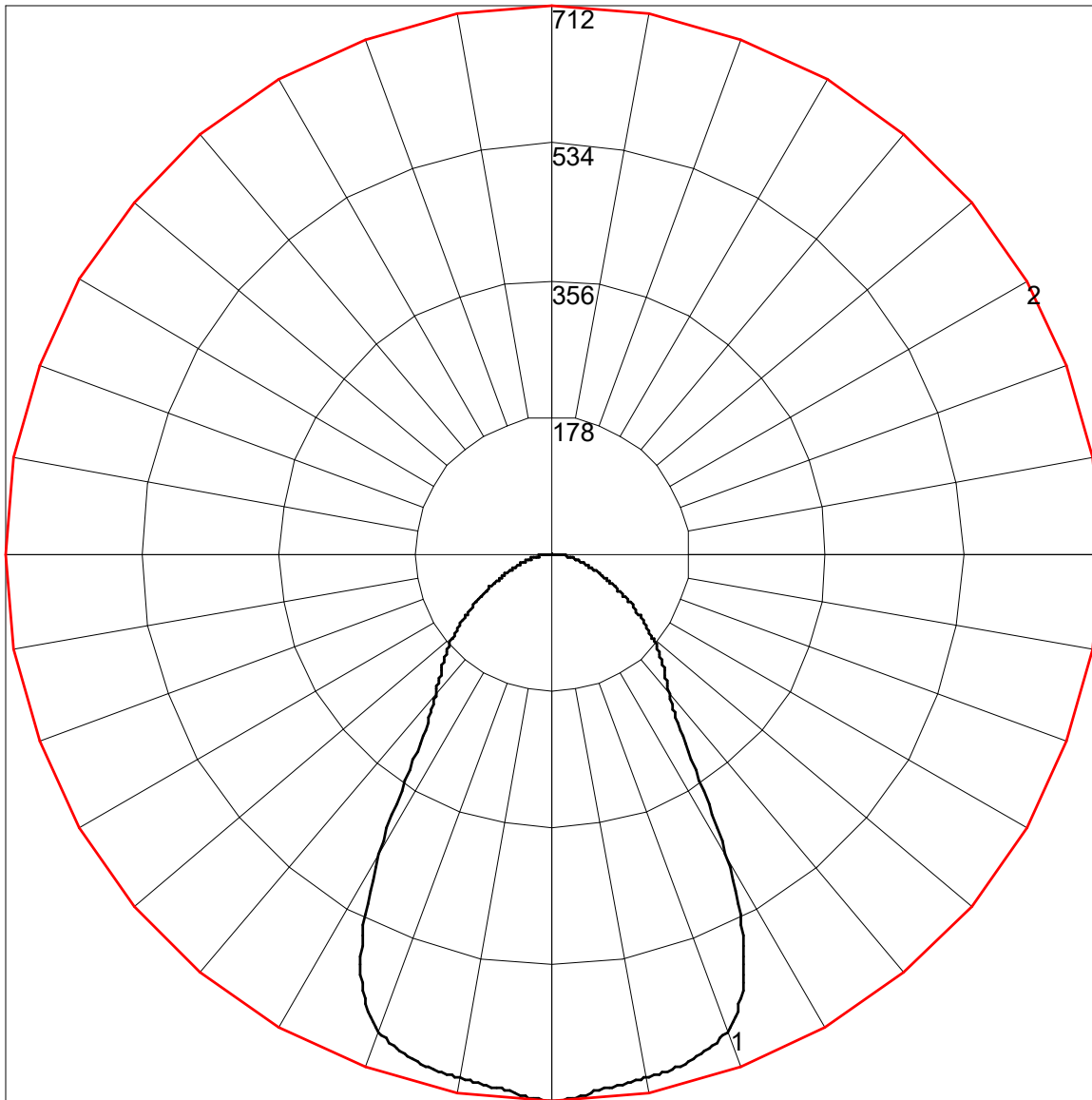
X=2H	Y=2H	19.4	20.8	19.8	21.1	21.4	19.4	20.8	19.8	21.1	21.4
	3H	20.6	21.9	21.0	22.2	22.5	20.6	21.9	21.0	22.2	22.5
	4H	21.0	22.2	21.4	22.5	22.9	21.0	22.2	21.4	22.5	22.9
	6H	21.3	22.3	21.7	22.7	23.1	21.3	22.3	21.7	22.7	23.1
	8H	21.3	22.4	21.8	22.8	23.2	21.3	22.4	21.8	22.8	23.2
	12H	21.4	22.4	21.8	22.7	23.2	21.4	22.4	21.8	22.7	23.2

UGR Viewed Endwise

4H	2H	19.8	21.0	20.2	21.3	21.7	19.8	21.0	20.2	21.3	21.7
	3H	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.6	23.0
	4H	21.7	22.6	22.1	23.0	23.4	21.7	22.6	22.1	23.0	23.4
	6H	22.1	22.8	22.6	23.3	23.7	22.1	22.8	22.6	23.3	23.7
	8H	22.2	22.9	22.6	23.3	23.8	22.2	22.9	22.6	23.3	23.8
	12H	22.3	22.9	22.7	23.4	23.8	22.3	22.9	22.7	23.4	23.8
8H	4H	21.9	22.6	22.3	23.0	23.5	21.9	22.6	22.3	23.0	23.5
	6H	22.3	22.9	22.8	23.4	23.9	22.3	22.9	22.8	23.4	23.9
	8H	22.5	23.0	23.0	23.5	24.0	22.5	23.0	23.0	23.5	24.0
	12H	22.6	23.1	23.1	23.6	24.1	22.6	23.1	23.1	23.6	24.1
12H	4H	21.9	22.5	22.3	23.0	23.4	21.9	22.5	22.3	23.0	23.4
	6H	22.4	22.9	22.9	23.3	23.9	22.4	22.9	22.9	23.3	23.9
	8H	22.6	23.0	23.1	23.5	24.1	22.6	23.0	23.1	23.5	24.1

Maximum UGR = 24.1

POLAR GRAPH



Maximum Candela = 712.225 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.)