



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-P29-835-XXX-POE-RW-WH-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-P29-835-xxx-POE x-RW-WH-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2375
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.04
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.48 ft (Diameter)
Luminous Width (90-270)	0.48 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	32070	32070	32070
55	26745	26745	26745
65	18869	18869	18869
75	11559	11559	11559
85	9116	9116	9116

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CANDELA TABULATION

	<u>0</u>
0.0	1757.007
0.5	1755.364
1.0	1753.720
1.5	1752.077
2.0	1748.789
2.5	1743.859
3.0	1738.928
3.5	1732.353
4.0	1725.779
4.5	1720.848
5.0	1714.274
5.5	1707.699
6.0	1701.125
6.5	1694.551
7.0	1687.976
7.5	1681.402
8.0	1673.184
8.5	1666.609
9.0	1660.035
9.5	1651.817
10.0	1645.243
10.5	1637.189
11.0	1629.300
11.5	1621.410
12.0	1613.521
12.5	1605.796
13.0	1597.907
13.5	1589.689
14.0	1581.635
14.5	1573.746
15.0	1566.350
15.5	1558.789
16.0	1551.393
16.5	1544.161
17.0	1537.423
17.5	1530.684
18.0	1524.109
18.5	1517.864
19.0	1511.618
19.5	1505.208
20.0	1498.634
20.5	1491.566
21.0	1483.512
21.5	1474.308
22.0	1463.954
22.5	1452.448
23.0	1439.957
23.5	1425.822
24.0	1410.372
24.5	1393.443
25.0	1374.706
25.5	1354.490
26.0	1331.973
26.5	1307.319

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	1281.021
<b>27.5</b>	1252.422
<b>28.0</b>	1222.016
<b>28.5</b>	1188.980
<b>29.0</b>	1154.135
<b>29.5</b>	1116.332
<b>30.0</b>	1076.229
<b>30.5</b>	1033.824
<b>31.0</b>	989.775
<b>31.5</b>	944.741
<b>32.0</b>	898.884
<b>32.5</b>	853.357
<b>33.0</b>	808.322
<b>33.5</b>	764.767
<b>34.0</b>	723.019
<b>34.5</b>	683.737
<b>35.0</b>	647.907
<b>35.5</b>	615.035
<b>36.0</b>	586.107
<b>36.5</b>	560.467
<b>37.0</b>	537.950
<b>37.5</b>	518.720
<b>38.0</b>	501.791
<b>38.5</b>	486.834
<b>39.0</b>	473.850
<b>39.5</b>	462.344
<b>40.0</b>	451.825
<b>40.5</b>	442.292
<b>41.0</b>	433.417
<b>41.5</b>	425.363
<b>42.0</b>	417.967
<b>42.5</b>	410.900
<b>43.0</b>	404.161
<b>43.5</b>	397.751
<b>44.0</b>	391.670
<b>44.5</b>	385.917
<b>45.0</b>	380.000
<b>45.5</b>	374.412
<b>46.0</b>	368.659
<b>46.5</b>	363.071
<b>47.0</b>	357.318
<b>47.5</b>	351.566
<b>48.0</b>	345.649
<b>48.5</b>	339.732
<b>49.0</b>	334.144
<b>49.5</b>	328.391
<b>50.0</b>	322.310
<b>50.5</b>	316.064
<b>51.0</b>	309.654
<b>51.5</b>	303.244
<b>52.0</b>	296.834
<b>52.5</b>	290.260
<b>53.0</b>	283.850
<b>53.5</b>	277.604
<b>54.0</b>	270.701
<b>54.5</b>	263.798

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**CANDELA TABULATION - (Cont.)**

<b>55.0</b>	257.059
<b>55.5</b>	250.156
<b>56.0</b>	243.417
<b>56.5</b>	236.678
<b>57.0</b>	229.940
<b>57.5</b>	223.201
<b>58.0</b>	216.791
<b>58.5</b>	210.216
<b>59.0</b>	203.806
<b>59.5</b>	197.561
<b>60.0</b>	191.315
<b>60.5</b>	185.069
<b>61.0</b>	178.988
<b>61.5</b>	173.071
<b>62.0</b>	167.154
<b>62.5</b>	161.401
<b>63.0</b>	155.649
<b>63.5</b>	149.896
<b>64.0</b>	144.472
<b>64.5</b>	138.884
<b>65.0</b>	133.625
<b>65.5</b>	128.201
<b>66.0</b>	123.106
<b>66.5</b>	118.010
<b>67.0</b>	113.080
<b>67.5</b>	108.149
<b>68.0</b>	103.382
<b>68.5</b>	98.616
<b>69.0</b>	94.178
<b>69.5</b>	89.576
<b>70.0</b>	85.303
<b>70.5</b>	81.029
<b>71.0</b>	76.920
<b>71.5</b>	72.976
<b>72.0</b>	69.031
<b>72.5</b>	65.415
<b>73.0</b>	61.964
<b>73.5</b>	58.841
<b>74.0</b>	55.718
<b>74.5</b>	52.924
<b>75.0</b>	50.130
<b>75.5</b>	47.664
<b>76.0</b>	45.199
<b>76.5</b>	43.062
<b>77.0</b>	41.090
<b>77.5</b>	39.118
<b>78.0</b>	37.145
<b>78.5</b>	35.173
<b>79.0</b>	33.365
<b>79.5</b>	31.557
<b>80.0</b>	29.749
<b>80.5</b>	27.941
<b>81.0</b>	26.133
<b>81.5</b>	24.490
<b>82.0</b>	22.682
<b>82.5</b>	21.038

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CANDELA TABULATION - (Cont.)

83.0	19.394
83.5	17.915
84.0	16.272
84.5	14.792
85.0	13.313
85.5	11.834
86.0	10.355
86.5	8.875
87.0	7.561
87.5	6.081
88.0	4.931
88.5	3.945
89.0	3.123
89.5	2.301
90.0	1.644
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  
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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
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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

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

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
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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

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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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	603.74	N.A.	25.40
0-30	1220.54	N.A.	51.40
0-40	1647.28	N.A.	69.40
0-60	2170.96	N.A.	91.40
0-80	2360.01	N.A.	99.40
0-90	2375.17	N.A.	100.00
10-90	2213.77	N.A.	93.20
20-40	1043.53	N.A.	43.90
20-50	1337.96	N.A.	56.30
40-70	657.11	N.A.	27.70
60-80	189.05	N.A.	8.00
70-80	55.62	N.A.	2.30
80-90	15.16	N.A.	0.60
90-110	0.05	N.A.	0.00
90-120	0.05	N.A.	0.00
90-130	0.05	N.A.	0.00
90-150	0.05	N.A.	0.00
90-180	0.05	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2375.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	161.40
10-20	442.34
20-30	616.79
30-40	426.74
40-50	294.42
50-60	229.26
60-70	133.43
70-80	55.62
80-90	15.16
90-100	0.05
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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38

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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	20.8	22.2	21.2	22.5	22.8	20.8	22.2	21.2	22.5	22.8
	3H	21.8	23.0	22.2	23.3	23.7	21.8	23.0	22.2	23.3	23.7
	4H	22.1	23.2	22.5	23.5	23.9	22.1	23.2	22.5	23.5	23.9
	6H	22.2	23.3	22.7	23.6	24.0	22.2	23.3	22.7	23.6	24.0
	8H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	12H	22.3	23.2	22.8	23.6	24.1	22.3	23.2	22.8	23.6	24.1

UGR Viewed Endwise

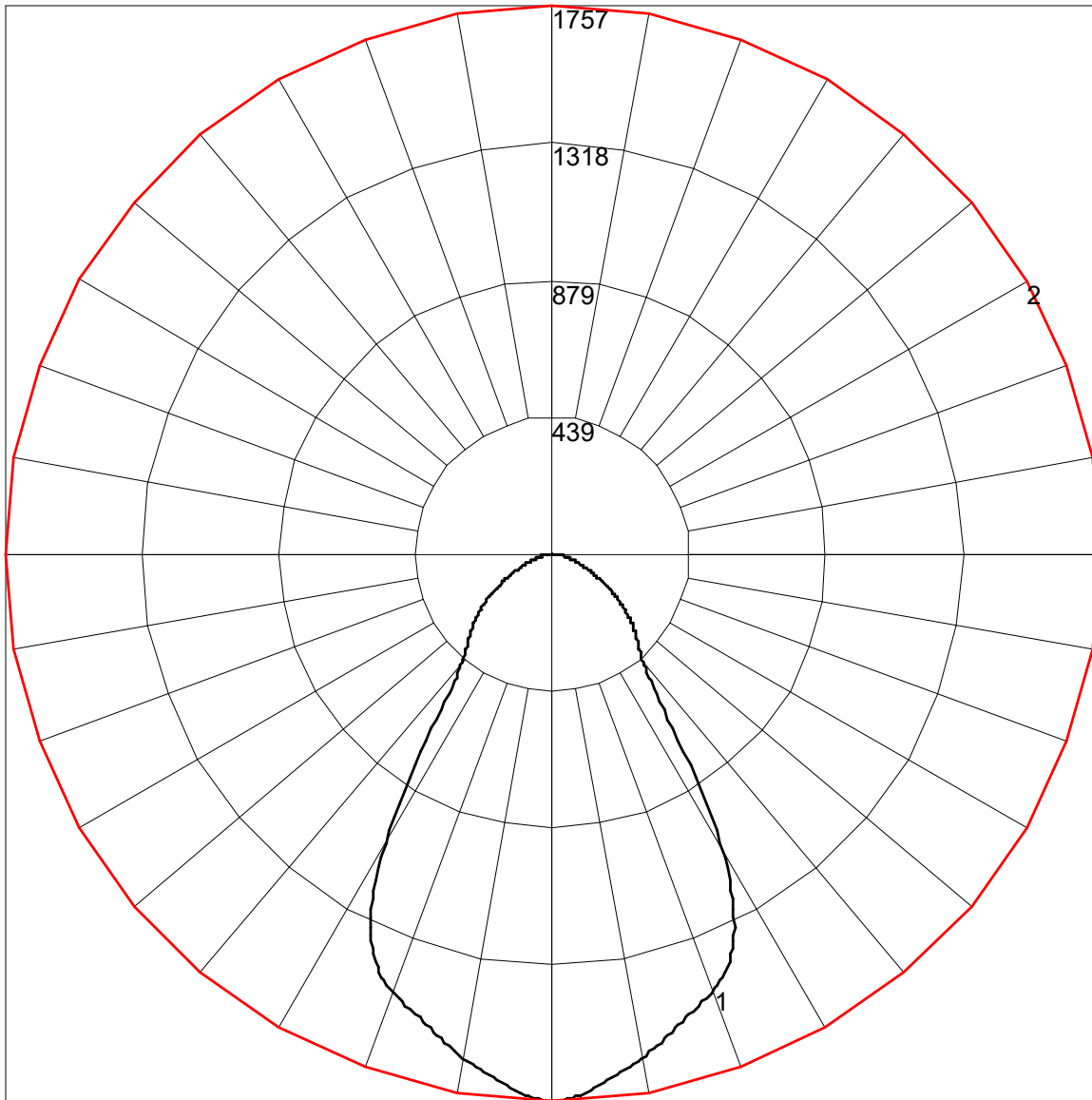
4H	2H	21.2	22.3	21.6	22.6	23.0	21.2	22.3	21.6	22.6	23.0
	3H	22.3	23.2	22.7	23.6	24.0	22.3	23.2	22.7	23.6	24.0
	4H	22.7	23.5	23.1	23.9	24.3	22.7	23.5	23.1	23.9	24.3
	6H	22.9	23.6	23.4	24.1	24.5	22.9	23.6	23.4	24.1	24.5
	8H	23.0	23.6	23.5	24.1	24.6	23.0	23.6	23.5	24.1	24.6
	12H	23.1	23.6	23.5	24.1	24.6	23.1	23.6	23.5	24.1	24.6

8H	4H	22.7	23.4	23.2	23.8	24.3	22.7	23.4	23.2	23.8	24.3
	6H	23.1	23.6	23.6	24.1	24.6	23.1	23.6	23.6	24.1	24.6
	8H	23.2	23.7	23.7	24.2	24.7	23.2	23.7	23.7	24.2	24.7
	12H	23.3	23.7	23.8	24.2	24.8	23.3	23.7	23.8	24.2	24.8

12H	4H	22.7	23.3	23.2	23.8	24.3	22.7	23.3	23.2	23.8	24.3
	6H	23.1	23.6	23.6	24.0	24.6	23.1	23.6	23.6	24.0	24.6
	8H	23.2	23.7	23.8	24.2	24.7	23.2	23.7	23.8	24.2	24.7

Maximum UGR = 24.8

POLAR GRAPH



Maximum Candela = 1757.007 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.)