



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L25-835-XXX-DIM-UNV-OW-SG-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13131414.04
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L25-835-xxx-DIM-UNV-OW-SG-xx
 [LUMINAIRE] Aluminum housing and reflector, no enclosure
 [LAMP] One white LED
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Downlight
 [SEARCH_MOUNTING] Pendant, Surface, Suspended, Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2243
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	30.0672
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.02
Spacing Criterion (90-270)	1.02
Spacing Criterion (Diagonal)	0.88
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

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	139463	139463	139463
55	53742	53742	53742
65	19470	19470	19470
75	7092	7092	7092
85	2179	2179	2179

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CANDELA TABULATION

	<u>0</u>
0.0	2036.0
0.5	2036.0
1.0	2035.0
1.5	2033.0
2.0	2031.0
2.5	2028.0
3.0	2025.0
3.5	2022.0
4.0	2018.0
4.5	2016.0
5.0	2013.0
5.5	2012.0
6.0	2010.0
6.5	2009.0
7.0	2008.0
7.5	2007.0
8.0	2007.0
8.5	2006.0
9.0	2005.0
9.5	2005.0
10.0	2005.0
10.5	2004.0
11.0	2004.0
11.5	2004.0
12.0	2004.0
12.5	2004.0
13.0	2002.0
13.5	2000.0
14.0	1996.0
14.5	1992.0
15.0	1986.0
15.5	1980.0
16.0	1974.0
16.5	1968.0
17.0	1962.0
17.5	1956.0
18.0	1949.0
18.5	1941.0
19.0	1933.0
19.5	1924.0
20.0	1915.0
20.5	1902.0
21.0	1889.0
21.5	1868.0
22.0	1841.0
22.5	1809.0
23.0	1775.0
23.5	1738.0
24.0	1699.0
24.5	1655.0
25.0	1608.0
25.5	1552.0
26.0	1493.0
26.5	1428.0

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CANDELA TABULATION - (Cont.)

27.0	1361.0
27.5	1293.0
28.0	1225.0
28.5	1159.0
29.0	1096.0
29.5	1038.0
30.0	985.4
30.5	937.6
31.0	893.3
31.5	852.0
32.0	812.7
32.5	775.6
33.0	741.9
33.5	712.9
34.0	688.1
34.5	668.0
35.0	651.0
35.5	635.6
36.0	619.8
36.5	603.1
37.0	586.1
37.5	569.0
38.0	551.6
38.5	533.7
39.0	515.7
39.5	497.5
40.0	479.3
40.5	461.1
41.0	443.0
41.5	425.3
42.0	407.9
42.5	390.9
43.0	374.1
43.5	357.8
44.0	341.9
44.5	326.5
45.0	311.6
45.5	297.3
46.0	283.4
46.5	269.9
47.0	257.1
47.5	244.6
48.0	232.6
48.5	220.9
49.0	209.4
49.5	198.0
50.0	187.0
50.5	176.4
51.0	166.2
51.5	156.5
52.0	147.1
52.5	138.0
53.0	129.1
53.5	120.5
54.0	112.4
54.5	104.7

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CANDELA TABULATION - (Cont.)

55.0	97.4
55.5	90.5
56.0	84.2
56.5	78.3
57.0	72.9
57.5	68.0
58.0	63.5
58.5	59.3
59.0	55.4
59.5	51.9
60.0	48.6
60.5	45.6
61.0	42.8
61.5	40.2
62.0	37.8
62.5	35.5
63.0	33.3
63.5	31.3
64.0	29.5
64.5	27.7
65.0	26.0
65.5	24.4
66.0	22.8
66.5	21.4
67.0	20.0
67.5	18.7
68.0	17.4
68.5	16.2
69.0	15.1
69.5	14.0
70.0	13.0
70.5	12.1
71.0	11.2
71.5	10.4
72.0	9.6
72.5	8.8
73.0	8.1
73.5	7.5
74.0	6.9
74.5	6.3
75.0	5.8
75.5	5.3
76.0	4.8
76.5	4.4
77.0	4.0
77.5	3.6
78.0	3.3
78.5	3.0
79.0	2.7
79.5	2.4
80.0	2.1
80.5	1.9
81.0	1.7
81.5	1.5
82.0	1.4
82.5	1.2

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CANDELA TABULATION - (Cont.)

83.0	1.1
83.5	0.9
84.0	0.8
84.5	0.7
85.0	0.6
85.5	0.5
86.0	0.4
86.5	0.4
87.0	0.3
87.5	0.2
88.0	0.2
88.5	0.2
89.0	0.1
89.5	0.1
90.0	0.1
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

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CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

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167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	751.03	N.A.	33.50
0-30	1451.46	N.A.	64.70
0-40	1871.9	N.A.	83.50
0-60	2208.4	N.A.	98.50
0-80	2242.2	N.A.	100.00
0-90	2243.03	N.A.	100.00
10-90	2051.05	N.A.	91.40
20-40	1120.87	N.A.	50.00
20-50	1364.88	N.A.	60.80
40-70	363.58	N.A.	16.20
60-80	33.80	N.A.	1.50
70-80	6.71	N.A.	0.30
80-90	0.83	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2243.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	191.98
10-20	559.06
20-30	700.42
30-40	420.45
40-50	244.01
50-60	92.49
60-70	27.09
70-80	6.71
80-90	0.83
90-100	0.00
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	113	110	107	105	111	108	105	103	104	102	100	100	99	97	97	95	94	93
2	107	102	97	94	105	100	96	92	97	93	90	94	91	89	91	89	87	85
3	101	94	89	84	99	92	88	84	90	86	82	87	84	81	85	82	80	78
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	73	72
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66
6	85	75	69	64	83	75	69	64	73	68	64	72	67	63	70	66	63	61
7	80	71	64	60	79	70	64	59	68	63	59	67	62	59	66	62	58	57
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53
9	72	62	56	52	71	62	56	51	61	55	51	60	55	51	59	54	51	49
10	69	58	52	48	68	58	52	48	57	52	48	56	51	48	56	51	48	46

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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

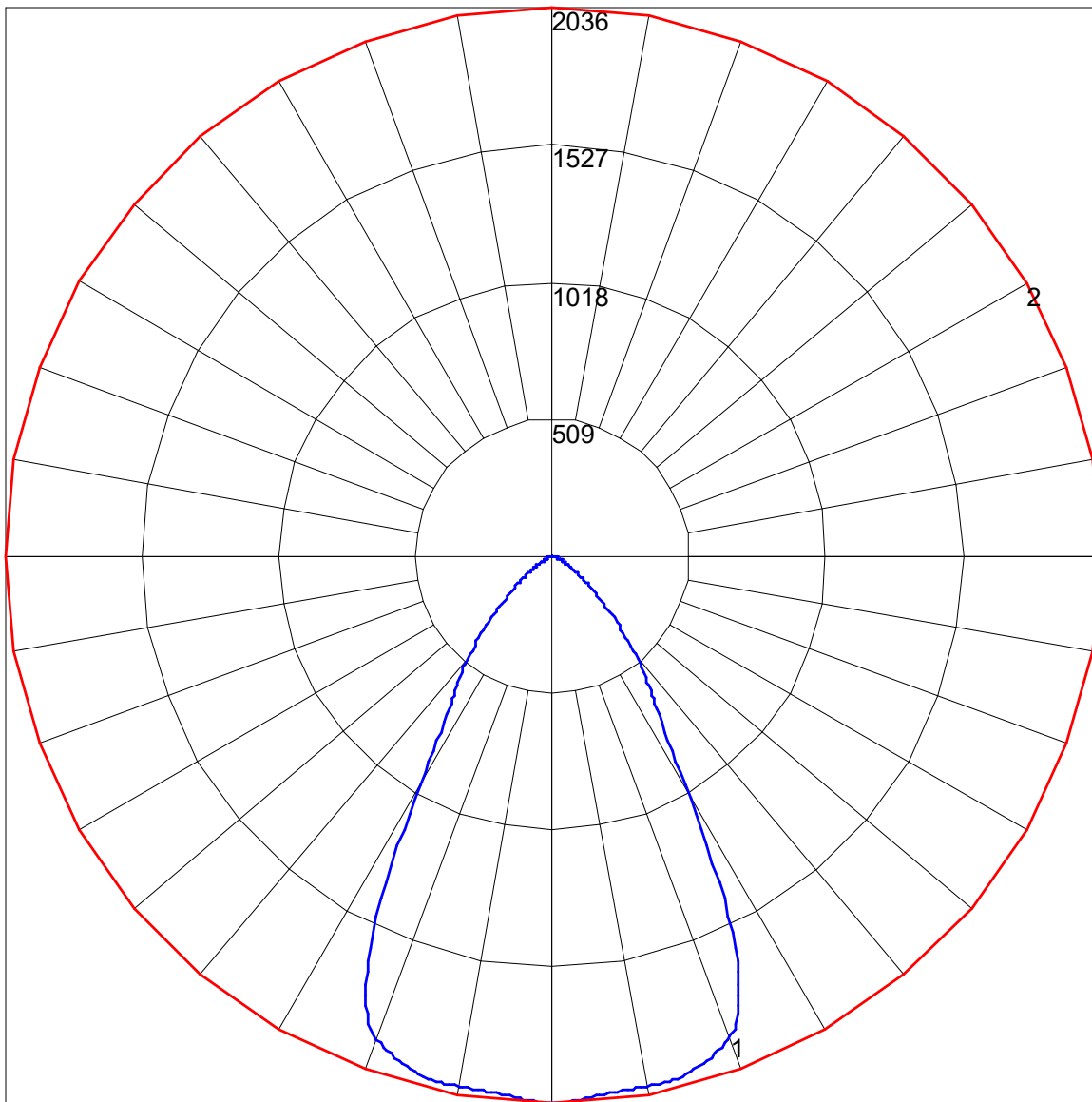
X=2H	Y=2H	18.8	19.9	19.2	20.2	20.5	18.8	19.9	19.2	20.2	20.5
	3H	19.0	20.0	19.4	20.3	20.7	19.0	20.0	19.4	20.3	20.7
	4H	19.0	19.9	19.4	20.2	20.6	19.0	19.9	19.4	20.2	20.6
	6H	18.9	19.7	19.3	20.1	20.5	18.9	19.7	19.3	20.1	20.5
	8H	18.9	19.6	19.3	20.0	20.4	18.9	19.6	19.3	20.0	20.4
	12H	18.8	19.5	19.3	19.9	20.4	18.8	19.5	19.3	19.9	20.4

UGR Viewed Endwise

4H	2H	18.8	19.7	19.2	20.0	20.4	18.8	19.7	19.2	20.0	20.4
	3H	19.1	19.8	19.5	20.2	20.6	19.1	19.8	19.5	20.2	20.6
	4H	19.0	19.7	19.5	20.1	20.6	19.0	19.7	19.5	20.1	20.6
	6H	19.0	19.5	19.5	20.0	20.5	19.0	19.5	19.5	20.0	20.5
	8H	18.9	19.4	19.4	19.9	20.4	18.9	19.4	19.4	19.9	20.4
	12H	18.9	19.3	19.4	19.8	20.3	18.9	19.3	19.4	19.8	20.3
8H	4H	18.9	19.4	19.4	19.9	20.4	18.9	19.4	19.4	19.9	20.4
	6H	18.9	19.3	19.4	19.8	20.3	18.9	19.3	19.4	19.8	20.3
	8H	18.8	19.2	19.3	19.7	20.2	18.8	19.2	19.3	19.7	20.2
	12H	18.8	19.1	19.3	19.6	20.1	18.8	19.1	19.3	19.6	20.1
12H	4H	18.9	19.3	19.4	19.8	20.3	18.9	19.3	19.4	19.8	20.3
	6H	18.8	19.2	19.3	19.6	20.2	18.8	19.2	19.3	19.6	20.2
	8H	18.8	19.1	19.3	19.6	20.1	18.8	19.1	19.3	19.6	20.1

Maximum UGR = 20.7

POLAR GRAPH



Maximum Candela = 2036 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)