



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12316380.16  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 11 JAN 2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4DR-L13-9TC-DIM-120-RW-OF-CS-AD BLUE  
 [LUMINAIRE] Black formed aluminum housing, white reflector, frosted pl  
 [MORE] astic lens enclosure  
 [LAMP] One white LED  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight  
 [\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	43
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	6
Total Luminaire Watts	6.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	1358	1358	1358
55	994	994	994
65	714	714	714
75	425	425	425
85	326	326	326

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES

CANDELA TABULATION

	<u>0</u>
0.0	21.677
0.5	21.673
1.0	21.662
1.5	21.646
2.0	21.627
2.5	21.604
3.0	21.573
3.5	21.542
4.0	21.512
4.5	21.485
5.0	21.454
5.5	21.427
6.0	21.396
6.5	21.366
7.0	21.331
7.5	21.297
8.0	21.262
8.5	21.224
9.0	21.185
9.5	21.147
10.0	21.101
10.5	21.062
11.0	21.016
11.5	20.966
12.0	20.916
12.5	20.859
13.0	20.805
13.5	20.743
14.0	20.682
14.5	20.613
15.0	20.540
15.5	20.470
16.0	20.397
16.5	20.324
17.0	20.248
17.5	20.171
18.0	20.098
18.5	20.025
19.0	19.948
19.5	19.875
20.0	19.798
20.5	19.717
21.0	19.633
21.5	19.548
22.0	19.452
22.5	19.345
23.0	19.230
23.5	19.107
24.0	18.980
24.5	18.845
25.0	18.707
25.5	18.561
26.0	18.407
26.5	18.250

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES**

**CANDELA TABULATION - (Cont.)**

27.0	18.088
27.5	17.927
28.0	17.758
28.5	17.593
29.0	17.420
29.5	17.251
30.0	17.070
30.5	16.890
31.0	16.698
31.5	16.505
32.0	16.306
32.5	16.098
33.0	15.891
33.5	15.676
34.0	15.457
34.5	15.234
35.0	15.007
35.5	14.769
36.0	14.527
36.5	14.285
37.0	14.035
37.5	13.785
38.0	13.539
38.5	13.278
39.0	13.021
39.5	12.759
40.0	12.494
40.5	12.225
41.0	11.960
41.5	11.695
42.0	11.430
42.5	11.165
43.0	10.900
43.5	10.639
44.0	10.377
44.5	10.116
45.0	9.863
45.5	9.613
46.0	9.363
46.5	9.117
47.0	8.883
47.5	8.648
48.0	8.418
48.5	8.195
49.0	7.991
49.5	7.788
50.0	7.584
50.5	7.388
51.0	7.192
51.5	7.004
52.0	6.823
52.5	6.658
53.0	6.501
53.5	6.332
54.0	6.170
54.5	6.009

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES

CANDELA TABULATION - (Cont.)

55.0	5.855
55.5	5.702
56.0	5.552
56.5	5.406
57.0	5.264
57.5	5.121
58.0	4.979
58.5	4.841
59.0	4.703
59.5	4.568
60.0	4.434
60.5	4.299
61.0	4.165
61.5	4.026
62.0	3.896
62.5	3.762
63.0	3.629
63.5	3.496
64.0	3.363
64.5	3.232
65.0	3.101
65.5	2.972
66.0	2.843
66.5	2.716
67.0	2.591
67.5	2.469
68.0	2.349
68.5	2.231
69.0	2.115
69.5	2.004
70.0	1.896
70.5	1.793
71.0	1.700
71.5	1.615
72.0	1.533
72.5	1.455
73.0	1.379
73.5	1.307
74.0	1.242
74.5	1.184
75.0	1.131
75.5	1.081
76.0	1.030
76.5	0.982
77.0	0.934
77.5	0.886
78.0	0.840
78.5	0.795
79.0	0.750
79.5	0.708
80.0	0.665
80.5	0.624
81.0	0.584
81.5	0.545
82.0	0.506
82.5	0.468

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES

CANDELA TABULATION - (Cont.)

83.0	0.431
83.5	0.395
84.0	0.360
84.5	0.325
85.0	0.292
85.5	0.259
86.0	0.226
86.5	0.194
87.0	0.164
87.5	0.133
88.0	0.105
88.5	0.085
89.0	0.069
89.5	0.054
90.0	0.040
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 : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES

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
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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES**

**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



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	7.83	N.A.	18.10
0-30	16.41	N.A.	37.90
0-40	25.72	N.A.	59.40
0-60	38.62	N.A.	89.20
0-80	42.94	N.A.	99.20
0-90	43.28	N.A.	100.00
10-90	41.24	N.A.	95.30
20-40	17.89	N.A.	41.30
20-50	25.52	N.A.	59.00
40-70	15.98	N.A.	36.90
60-80	4.33	N.A.	10.00
70-80	1.24	N.A.	2.90
80-90	0.34	N.A.	0.80
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	43.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	2.04
10-20	5.79
20-30	8.58
30-40	9.32
40-50	7.63
50-60	5.27
60-70	3.08
70-80	1.24
80-90	0.34
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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	101
1	111	107	104	101	109	105	102	99	101	98	96	97	95	93	94	92	90	88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	85	81	79	77
3	95	86	79	73	93	84	78	73	82	76	71	79	74	70	76	72	69	67
4	88	77	70	64	86	76	69	63	74	67	63	72	66	62	69	65	61	59
5	82	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	54	48	44	42
8	66	54	46	41	65	53	46	40	52	45	40	51	44	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	35
10	58	46	39	34	57	46	38	34	45	38	34	44	38	33	43	37	33	32

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-L13-9TC-DIM-120-RW-OF-CS-AD\_BLUE.IES**

**UGR TABLE - CORRECTED**

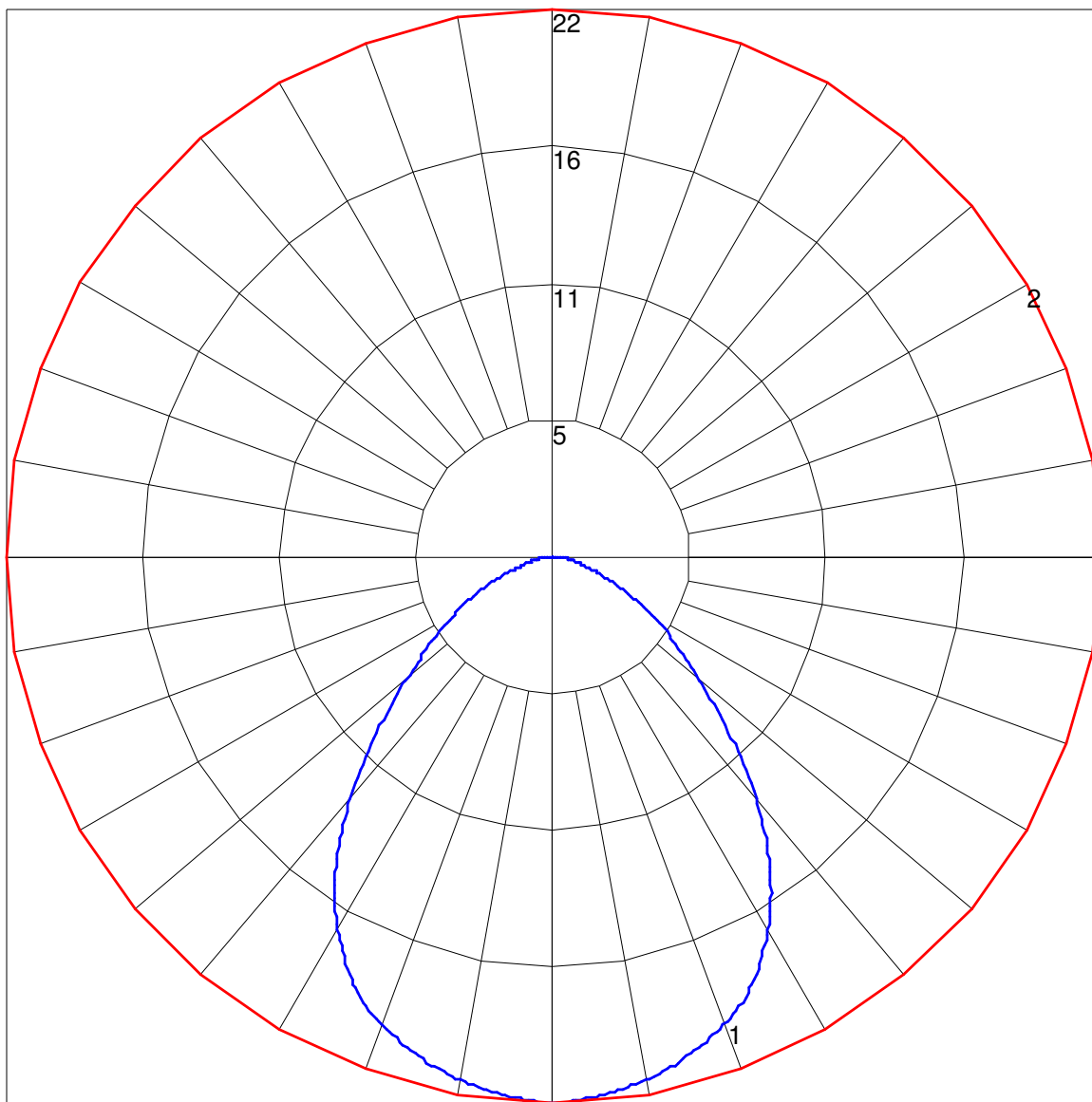
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	10.1	11.6	10.5	11.9	12.2	10.1	11.6	10.5	11.9	12.2
	3H	11.1	12.4	11.5	12.7	13.1	11.1	12.4	11.5	12.7	13.1
	4H	11.3	12.6	11.7	12.9	13.3	11.3	12.6	11.7	12.9	13.3
	6H	11.5	12.6	11.9	13.0	13.4	11.5	12.6	11.9	13.0	13.4
	8H	11.6	12.6	12.0	13.0	13.4	11.6	12.6	12.0	13.0	13.4
	12H	11.6	12.6	12.0	13.0	13.4	11.6	12.6	12.0	13.0	13.4
4H	2H	10.5	11.7	10.9	12.1	12.5	10.5	11.7	10.9	12.1	12.5
	3H	11.6	12.6	12.1	13.0	13.4	11.6	12.6	12.1	13.0	13.4
	4H	12.0	12.8	12.4	13.3	13.7	12.0	12.8	12.4	13.3	13.7
	6H	12.2	13.0	12.7	13.4	13.9	12.2	13.0	12.7	13.4	13.9
	8H	12.3	13.0	12.8	13.5	13.9	12.3	13.0	12.8	13.5	13.9
	12H	12.4	13.0	12.9	13.5	14.0	12.4	13.0	12.9	13.5	14.0
8H	4H	12.0	12.8	12.5	13.2	13.7	12.0	12.8	12.5	13.2	13.7
	6H	12.4	13.0	12.9	13.5	14.0	12.4	13.0	12.9	13.5	14.0
	8H	12.5	13.1	13.0	13.6	14.1	12.5	13.1	13.0	13.6	14.1
	12H	12.6	13.1	13.1	13.6	14.2	12.6	13.1	13.1	13.6	14.2
12H	4H	12.0	12.7	12.5	13.2	13.6	12.0	12.7	12.5	13.2	13.6
	6H	12.4	12.9	12.9	13.4	13.9	12.4	12.9	12.9	13.4	13.9
	8H	12.6	13.0	13.1	13.5	14.1	12.6	13.0	13.1	13.5	14.1

Maximum UGR = 14.2

POLAR GRAPH



Maximum Candela = 21.677 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.)