



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L16-9TC-DIM-UNV-OWW-OF-CS.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 20314.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 16-APR-2018
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4"SHORT HEATSINK 4"SQ CAST HOUSING DOWNLIGHT
 [MORE] WHITE MIXING CHAMBER & SEMISPEC WALLWASH TRIM w/FROST
 [LUMCAT] 4DS-L16-9TC-DIM-UNV-OWW-OF-CS
 [LAMPCAT] TUNABLE COB LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1555
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	39
Total Luminaire Watts	40.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.86
Spacing Criterion (90-270)	0.84
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	55013	32353	16237
55	40931	12548	2838
65	33655	3649	0
75	18539	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	1646.003	1646.003	1646.003	1646.003	1646.003	1646.003	1646.003	1646.003	1646.003
5	1644.236	1631.866	1636.284	1636.284	1637.168	1635.400	1638.935	1638.935	1638.051
10	1554.116	1550.582	1567.369	1569.136	1567.369	1570.903	1591.224	1599.176	1596.525
15	1402.151	1403.034	1416.287	1426.889	1410.102	1443.676	1479.017	1486.085	1469.298
20	1194.523	1221.912	1222.795	1228.980	1187.454	1236.048	1300.545	1274.923	1221.912
25	957.739	989.545	1001.915	937.418	917.097	951.554	1045.207	992.196	925.932
30	725.372	732.440	743.043	629.952	599.028	683.847	755.412	694.449	647.622
35	547.784	541.599	512.443	406.420	361.361	449.713	497.423	470.918	424.091
40	472.685	439.994	334.855	249.153	212.929	257.989	298.631	305.699	294.213
45	401.119	368.429	235.901	144.898	118.392	135.179	170.520	161.685	158.151
50	314.534	282.727	153.733	74.216	66.264	65.381	81.284	74.216	73.332
55	242.085	211.162	74.216	28.273	16.787	22.972	27.389	23.855	18.554
60	182.889	159.034	35.341	3.534	0.000	0.884	7.068	2.651	2.651
65	146.665	116.625	15.903	0.000	0.000	0.000	0.000	0.000	0.000
70	104.256	72.449	4.418	0.000	0.000	0.000	0.000	0.000	0.000
75	49.477	32.690	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	0.884	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	553.02	N.A.	35.60
0-30	994.93	N.A.	64.00
0-40	1294.68	N.A.	83.30
0-60	1521.00	N.A.	97.80
0-80	1555.04	N.A.	100.00
0-90	1555.06	N.A.	100.00
10-90	1400.94	N.A.	90.10
20-40	741.66	N.A.	47.70
20-50	902.33	N.A.	58.00
40-70	252.33	N.A.	16.20
60-80	34.04	N.A.	2.20
70-80	8.03	N.A.	0.50
80-90	0.02	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	1555.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	154.11
10-20	398.91
20-30	441.91
30-40	299.76
40-50	160.66
50-60	65.66
60-70	26.01
70-80	8.03
80-90	0.02
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

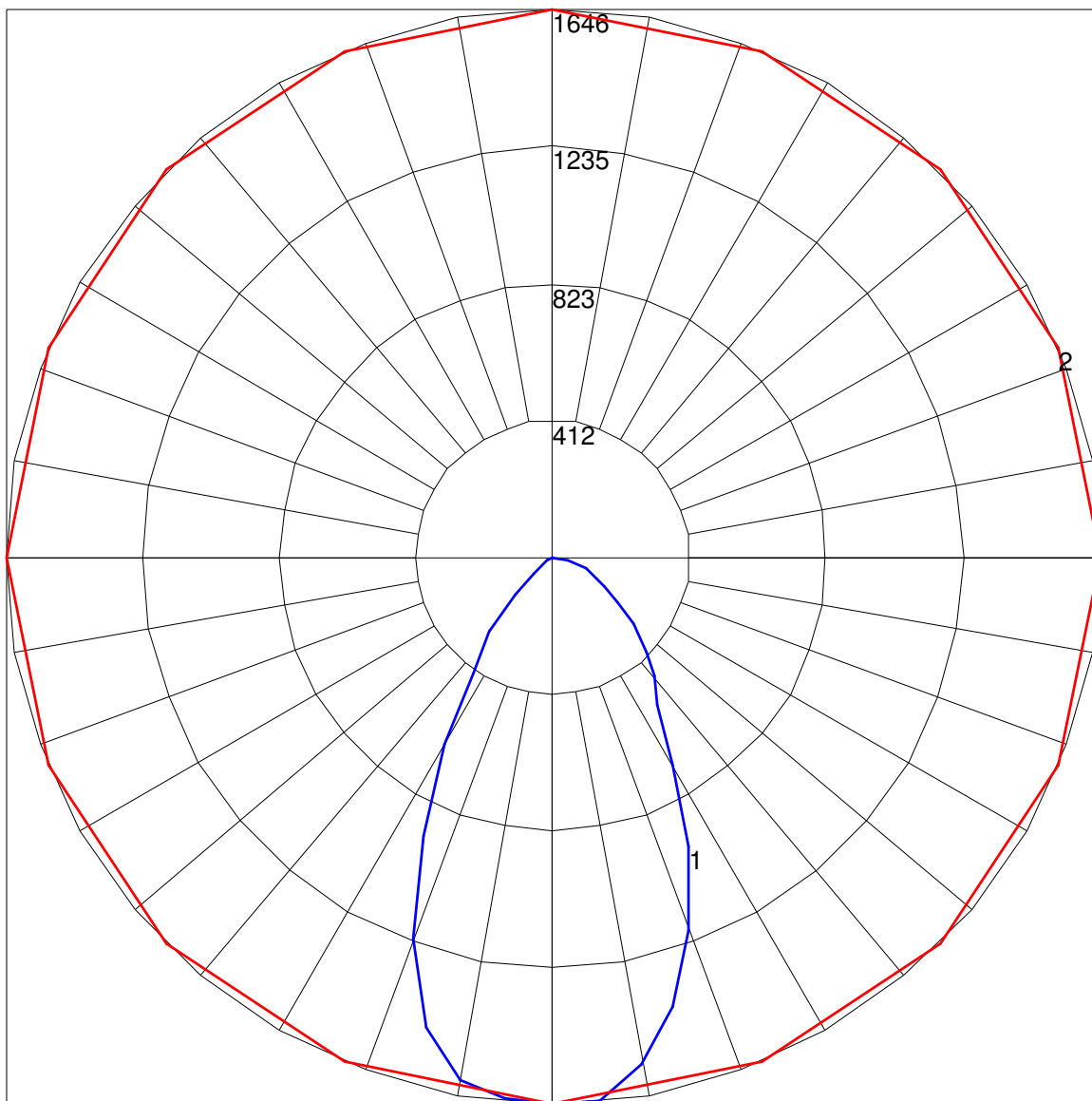
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	92
2	107	102	97	93	105	100	96	92	97	93	90	94	91	88	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	77	72	69	75	71	68	66
6	85	76	69	65	84	75	69	64	73	68	64	72	67	64	70	66	63	62
7	81	71	64	60	79	70	64	60	69	63	59	68	63	59	66	62	59	57
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	51	50
10	69	59	53	49	68	59	53	49	58	52	49	57	52	48	56	52	48	47

POLAR GRAPH



Maximum Candela = 1646.003 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.)