H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-835-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20990.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 03-04-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4' LENSED LED STRIP LUMINAIRE
[MORE] WHITE REFLECTOR w/ FROST ACRYLIC LENS
[LUMCAT] 76R-4-L52-835-DIM-UNV
[LAMPCAT] HLMX 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5103
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	35.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.98 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8929	8183	8397
55	7614	7092	7467
65	6125	5875	6465
75	4751	4981	5586
85	2229	4490	5201

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1647.915	1647.915	1647.915	1647.915	1647.915
5	1661.732	1639.944	1635.693	1635.693	1630.910
10	1631.442	1612.842	1613.905	1618.156	1612.842
15	1576.706	1562.358	1574.049	1586.803	1585.209
20	1506.028	1500.182	1519.313	1542.695	1543.758
25	1408.248	1414.625	1449.167	1479.989	1487.960
30	1305.153	1316.313	1365.735	1405.591	1421.002
35	1176.551	1202.590	1267.954	1320.033	1338.101
40	1053.794	1081.959	1160.609	1233.412	1250.418
45	908.187	949.106	1044.760	1123.410	1144.666
50	772.145	822.629	927.318	1013.938	1037.321
55	637.697	687.119	807.218	897.027	924.661
60	510.158	565.956	689.244	772.145	803.498
65	387.401	446.388	567.019	672.770	695.621
70	285.901	337.979	464.456	567.019	594.121
75	193.966	251.890	379.961	471.896	492.090
80	107.877	178.555	303.969	387.401	416.097
85	38.262	120.631	241.262	318.849	342.762
90	0.000	79.712	188.121	264.113	279.524
95	0.000	51.016	148.265	216.286	239.668
100	0.000	34.011	113.723	179.087	197.686
105	0.000	22.851	89.809	144.545	165.270
110	0.000	10.628	71.210	118.505	138.168
115	0.000	6.908	56.861	99.906	113.723
120	0.000	0.000	45.170	81.838	96.186
125	0.000	0.000	35.073	65.364	76.524
130	0.000	0.000	27.634	51.547	61.113
135	0.000	0.000	22.319	39.856	48.890
140	0.000	0.000	11.691	30.291	37.199
145	0.000	0.000	4.251	23.382	27.102
150	0.000	0.000	0.000	20.194	22.851
155	0.000	0.000	0.000	19.131	20.194
160	0.000	0.000	0.000	11.160	18.599
165	0.000	0.000	0.000	3.720	6.377
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	600.48	N.A.	11.80
0-30	1267.64	N.A.	24.80
0-40	2057.73	N.A.	40.30
0-60	3568.74	N.A.	69.90
0-80	4508.1	N.A.	88.30
0-90	4749.79	N.A.	93.10
10-90	4594.01	N.A.	90.00
20-40	1457.25	N.A.	28.60
20-50	2257.94	N.A.	44.20
40-70	2065.08	N.A.	40.50
60-80	939.36	N.A.	18.40
70-80	385.28	N.A.	7.60
80-90	241.70	N.A.	4.70
90-110	238.94	N.A.	4.70
90-120	294.00	N.A.	5.80
90-130	325.63	N.A.	6.40
90-150	349.29	N.A.	6.80
90-180	353.19	N.A.	6.90
110-180	114.25	N.A.	2.20
0-180	5102.98	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	155.78
10-20	444.70
20-30	667.16
30-40	790.09
40-50	800.69
50-60	710.32
60-70	554.08
70-80	385.28
80-90	241.70
90-100	147.92
100-110	91.02
110-120	55.06
120-130	31.64
130-140	16.73
140-150	6.92
150-160	3.23
160-170	0.67
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	96	92	102	98	93	90	92	89	85	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	88	77	68	61	84	74	67	60	70	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45
5	74	61	51	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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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					UGR Viewed Endwise				
X=2H	Y=2H	16.6	18.1	17.0	18.5	19.0	19.6	21.1	20.1	21.5	22.0
	3H	17.8	19.1	18.3	19.6	20.1	21.8	23.2	22.3	23.7	24.2
	4H	18.2	19.5	18.7	19.9	20.5	22.9	24.2	23.4	24.7	25.2
	6H	18.4	19.6	18.9	20.1	20.6	24.0	25.2	24.5	25.7	26.2
	8H	18.4	19.6	19.0	20.1	20.7	24.6	25.7	25.1	26.2	26.8
	12H	18.4	19.5	19.0	20.1	20.7	25.2	26.3	25.7	26.8	27.4
4H	2H	17.5	18.8	18.0	19.3	19.8	19.9	21.2	20.4	21.7	22.2
	3H	19.0	20.1	19.5	20.6	21.2	22.4	23.5	22.9	24.0	24.6
	4H	19.5	20.5	20.0	21.0	21.6	23.6	24.6	24.1	25.2	25.8
	6H	19.8	20.7	20.3	21.2	21.9	24.9	25.8	25.5	26.4	27.0
	8H	19.9	20.7	20.4	21.3	21.9	25.6	26.4	26.1	27.0	27.6
	12H	19.9	20.7	20.5	21.3	21.9	26.3	27.1	26.9	27.7	28.3
8H	4H	20.2	21.0	20.8	21.6	22.2	23.8	24.6	24.3	25.2	25.8
	6H	20.7	21.4	21.3	22.0	22.7	25.2	25.9	25.8	26.5	27.2
	8H	20.9	21.5	21.5	22.1	22.8	26.0	26.7	26.6	27.3	27.9
	12H	21.0	21.6	21.6	22.2	22.9	27.0	27.5	27.6	28.1	28.8
12H	4H	20.4	21.2	21.0	21.8	22.4	23.8	24.5	24.4	25.1	25.8
	6H	21.0	21.7	21.7	22.3	22.9	25.3	25.9	25.9	26.5	27.2
	8H	21.3	21.9	21.9	22.5	23.2	26.1	26.7	26.7	27.3	28.0

Maximum UGR = 28.8

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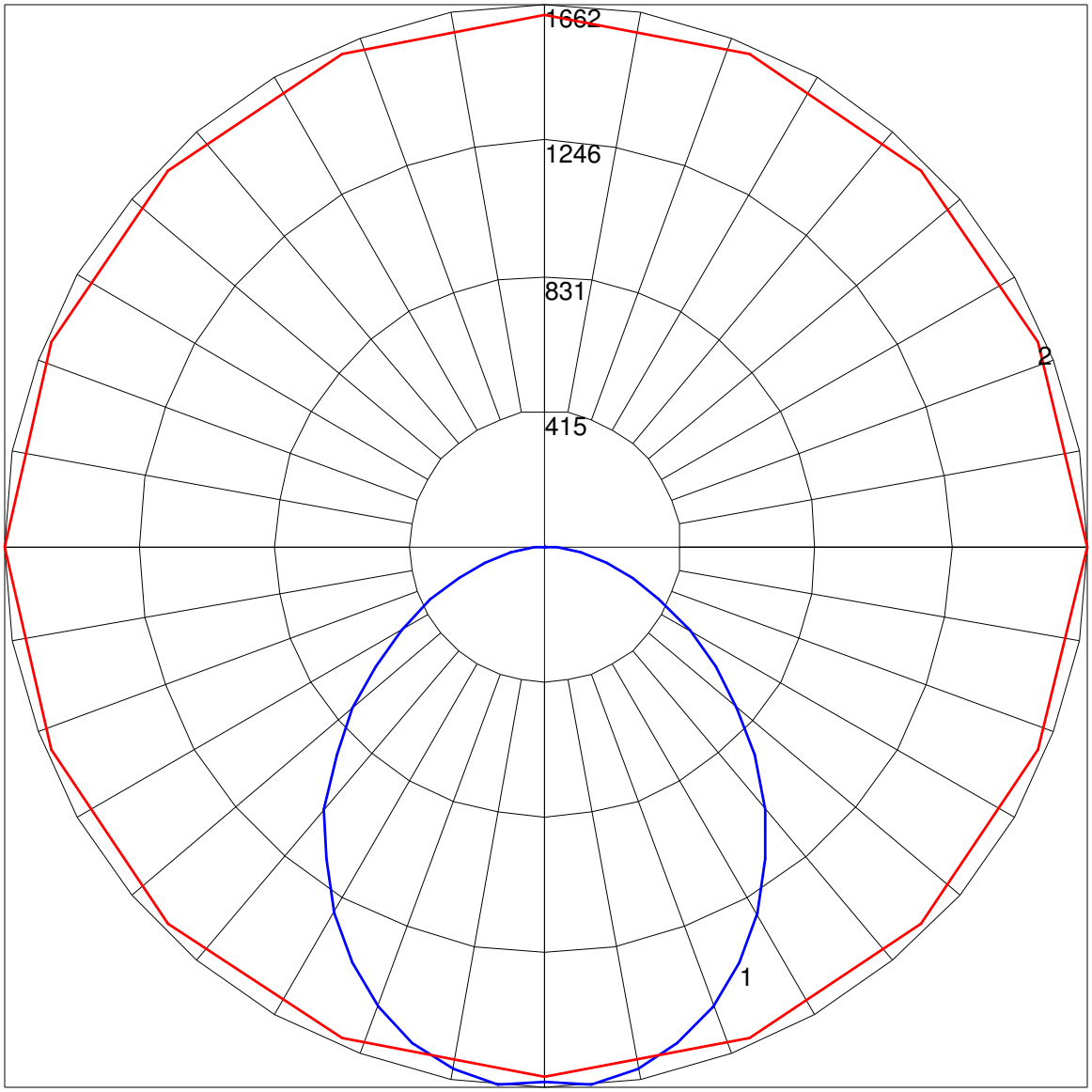
POLAR GRAPH



Maximum Candela = 1661.732 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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