H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-840-(L32)-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] 06-07-2021
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 72 LED 23.75", 68 LED 22.375"ARRAYS 4' 76R SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-4-L52/840-(L32)-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3207
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	21.6
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	5611	5143	5277
55	4785	4457	4692
65	3849	3692	4063
75	2985	3130	3510
85	1401	2822	3268

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1035.604	1035.604	1035.604	1035.604	1035.604
5	1044.287	1030.595	1027.923	1027.923	1024.917
10	1025.251	1013.563	1014.231	1016.902	1013.563
15	990.854	981.837	989.184	997.199	996.197
20	946.437	942.764	954.786	969.480	970.148
25	884.989	888.996	910.704	930.073	935.083
30	820.201	827.214	858.272	883.319	893.004
35	739.383	755.747	796.824	829.552	840.906
40	662.239	679.939	729.364	775.117	785.803
45	570.734	596.449	656.562	705.987	719.346
50	485.241	516.967	582.757	637.192	651.886
55	400.750	431.808	507.282	563.721	581.087
60	320.600	355.665	433.144	485.241	504.945
65	243.455	280.525	356.333	422.791	437.151
70	179.669	212.397	291.879	356.333	373.365
75	121.895	158.296	238.780	296.555	309.245
80	67.793	112.210	191.024	243.455	261.489
85	24.045	75.808	151.617	200.375	215.403
90	0.000	50.094	118.221	165.977	175.662
95	0.000	32.060	93.174	135.921	150.615
100	0.000	21.373	71.467	112.544	124.232
105	0.000	14.360	56.439	90.837	103.861
110	0.000	6.679	44.750	74.473	86.829
115	0.000	4.341	35.734	62.784	71.467
120	0.000	0.000	28.386	51.430	60.446
125	0.000	0.000	22.041	41.077	48.090
130	0.000	0.000	17.366	32.394	38.405
135	0.000	0.000	14.026	25.047	30.724
140	0.000	0.000	7.347	19.036	23.377
145	0.000	0.000	2.672	14.694	17.032
150	0.000	0.000	0.000	12.690	14.360
155	0.000	0.000	0.000	12.022	12.690
160	0.000	0.000	0.000	7.013	11.689
165	0.000	0.000	0.000	2.338	4.007
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	377.36	N.A.	11.80
0-30	796.63	N.A.	24.80
0-40	1293.15	N.A.	40.30
0-60	2242.71	N.A.	69.90
0-80	2833.03	N.A.	88.30
0-90	2984.92	N.A.	93.10
10-90	2887.02	N.A.	90.00
20-40	915.78	N.A.	28.60
20-50	1418.96	N.A.	44.20
40-70	1297.77	N.A.	40.50
60-80	590.32	N.A.	18.40
70-80	242.12	N.A.	7.60
80-90	151.89	N.A.	4.70
90-110	150.15	N.A.	4.70
90-120	184.76	N.A.	5.80
90-130	204.64	N.A.	6.40
90-150	219.51	N.A.	6.80
90-180	221.95	N.A.	6.90
110-180	71.80	N.A.	2.20
0-180	3206.88	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.90
10-20	279.46
20-30	419.27
30-40	496.52
40-50	503.18
50-60	446.39
60-70	348.20
70-80	242.12
80-90	151.89
90-100	92.95
100-110	57.20
110-120	34.60
120-130	19.88
130-140	10.52
140-150	4.35
150-160	2.03
160-170	0.42
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	14.9	16.4	15.3	16.8	17.3	17.9	19.4	18.4	19.8	20.3
	3H	16.1	17.4	16.6	17.9	18.4	20.1	21.5	20.6	22.0	22.5
	4H	16.5	17.8	17.0	18.2	18.8	21.2	22.5	21.7	23.0	23.5
	6H	16.7	17.9	17.2	18.4	18.9	22.3	23.5	22.8	24.0	24.5
	8H	16.7	17.9	17.3	18.4	19.0	22.9	24.0	23.4	24.5	25.1
	12H	16.7	17.8	17.3	18.4	19.0	23.5	24.6	24.0	25.1	25.7
4H	2H	15.8	17.1	16.3	17.6	18.1	18.2	19.5	18.7	20.0	20.5
	3H	17.3	18.4	17.8	18.9	19.5	20.7	21.8	21.2	22.3	22.9
	4H	17.8	18.8	18.3	19.3	19.9	21.9	22.9	22.4	23.5	24.1
	6H	18.1	19.0	18.6	19.5	20.2	23.2	24.1	23.8	24.7	25.3
	8H	18.2	19.0	18.7	19.6	20.2	23.9	24.7	24.4	25.3	25.9
	12H	18.2	19.0	18.8	19.6	20.2	24.6	25.4	25.2	26.0	26.6
8H	4H	18.5	19.3	19.1	19.9	20.5	22.1	22.9	22.6	23.5	24.1
	6H	19.0	19.7	19.6	20.3	21.0	23.5	24.2	24.1	24.8	25.5
	8H	19.2	19.8	19.8	20.4	21.1	24.3	25.0	24.9	25.6	26.2
	12H	19.3	19.9	19.9	20.5	21.2	25.3	25.8	25.9	26.4	27.1
12H	4H	18.7	19.5	19.3	20.1	20.7	22.1	22.8	22.7	23.4	24.1
	6H	19.3	20.0	20.0	20.6	21.2	23.6	24.2	24.2	24.8	25.5
	8H	19.6	20.2	20.2	20.8	21.5	24.4	25.0	25.0	25.6	26.3

Maximum UGR = 27.1

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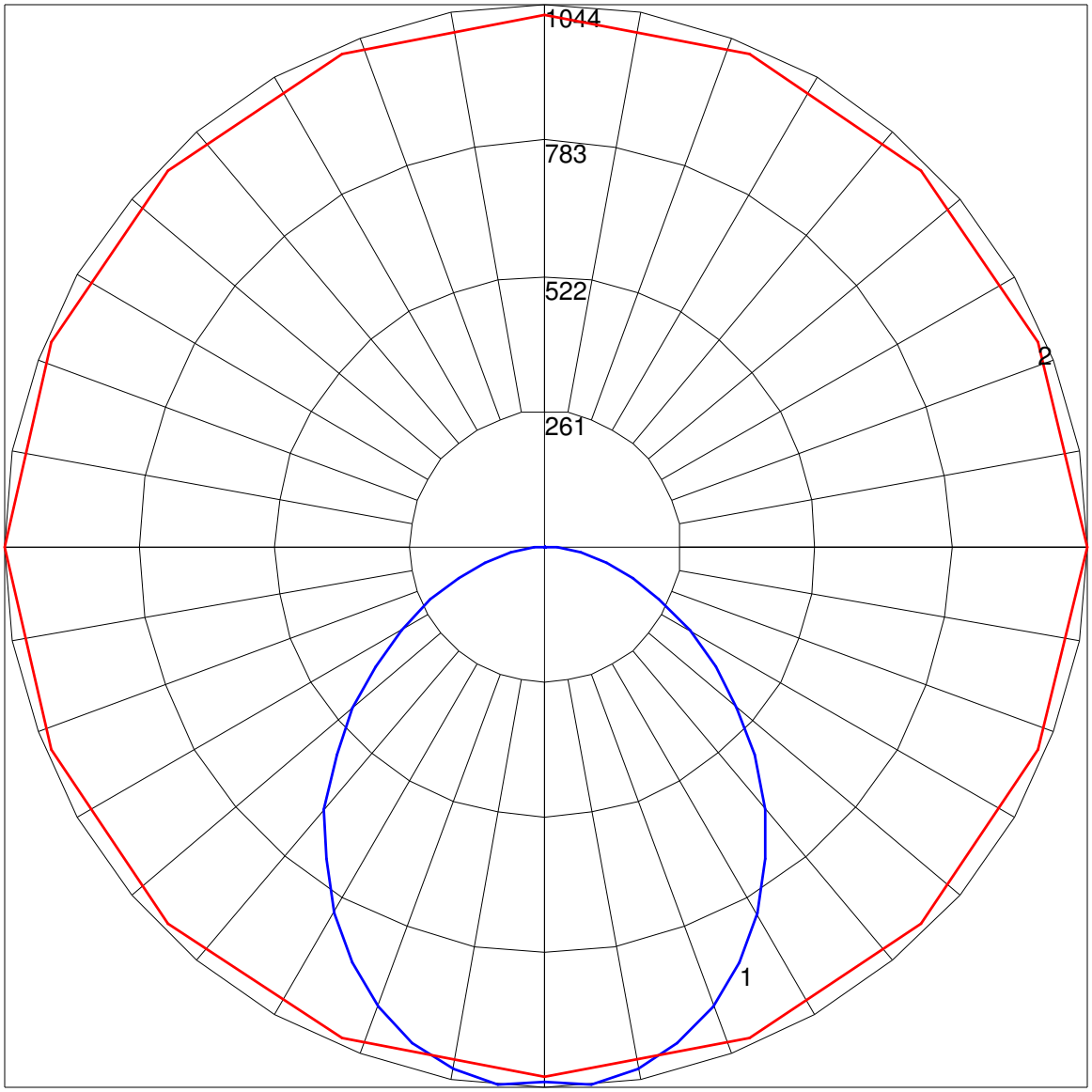
POLAR GRAPH



Maximum Candela = 1044.287 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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