H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L72-840-(L54)-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-L72/840-(L54)-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5527
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	38
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	9670	8863	9095
55	8246	7681	8087
65	6633	6362	7002
75	5145	5394	6050
85	2414	4863	5632

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1784.778	1784.778	1784.778	1784.778	1784.778
5	1799.743	1776.145	1771.541	1771.541	1766.361
10	1766.936	1746.792	1747.943	1752.548	1746.792
15	1707.655	1692.115	1704.777	1718.590	1716.864
20	1631.107	1624.776	1645.495	1670.820	1671.971
25	1525.206	1532.112	1569.523	1602.905	1611.538
30	1413.549	1425.636	1479.162	1522.328	1539.019
35	1274.266	1302.468	1373.261	1429.664	1449.233
40	1141.314	1171.818	1257.000	1335.850	1354.268
45	983.614	1027.931	1131.530	1216.711	1239.733
50	836.273	890.950	1004.334	1098.148	1123.472
55	690.659	744.185	874.259	971.527	1001.456
60	552.527	612.960	746.487	836.273	870.231
65	419.575	483.461	614.111	728.645	753.394
70	309.646	366.049	503.030	614.111	643.464
75	210.075	272.810	411.518	511.088	532.959
80	116.837	193.385	329.214	419.575	450.655
85	41.440	130.650	261.299	345.330	371.229
90	0.000	86.332	203.744	286.048	302.739
95	0.000	55.253	160.578	234.249	259.573
100	0.000	36.835	123.168	193.960	214.104
105	0.000	24.749	97.268	156.549	178.996
110	0.000	11.511	77.124	128.347	149.643
115	0.000	7.482	61.584	108.203	123.168
120	0.000	0.000	48.922	88.635	104.174
125	0.000	0.000	37.986	70.793	82.879
130	0.000	0.000	29.929	55.828	66.188
135	0.000	0.000	24.173	43.166	52.951
140	0.000	0.000	12.662	32.806	40.288
145	0.000	0.000	4.604	25.324	29.353
150	0.000	0.000	0.000	21.871	24.749
155	0.000	0.000	0.000	20.720	21.871
160	0.000	0.000	0.000	12.087	20.144
165	0.000	0.000	0.000	4.029	6.907
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	650.35	N.A.	11.80
0-30	1372.92	N.A.	24.80
0-40	2228.63	N.A.	40.30
0-60	3865.13	N.A.	69.90
0-80	4882.5	N.A.	88.30
0-90	5144.27	N.A.	93.10
10-90	4975.55	N.A.	90.00
20-40	1578.28	N.A.	28.60
20-50	2445.47	N.A.	44.20
40-70	2236.59	N.A.	40.50
60-80	1017.37	N.A.	18.40
70-80	417.28	N.A.	7.60
80-90	261.77	N.A.	4.70
90-110	258.78	N.A.	4.70
90-120	318.41	N.A.	5.80
90-130	352.68	N.A.	6.40
90-150	378.30	N.A.	6.80
90-180	382.52	N.A.	6.90
110-180	123.74	N.A.	2.20
0-180	5526.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	168.72
10-20	481.63
20-30	722.57
30-40	855.71
40-50	867.19
50-60	769.31
60-70	600.10
70-80	417.28
80-90	261.77
90-100	160.20
100-110	98.58
110-120	59.63
120-130	34.27
130-140	18.12
140-150	7.50
150-160	3.50
160-170	0.72
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	16.8	18.3	17.2	18.7	19.2	19.8	21.3	20.3	21.7	22.2
	3H	18.0	19.3	18.5	19.8	20.3	22.0	23.4	22.5	23.9	24.4
	4H	18.4	19.7	18.9	20.1	20.7	23.1	24.4	23.6	24.9	25.4
	6H	18.6	19.8	19.1	20.3	20.8	24.2	25.4	24.7	25.9	26.4
	8H	18.6	19.8	19.2	20.3	20.9	24.8	25.9	25.3	26.4	27.0
	12H	18.6	19.7	19.2	20.3	20.9	25.4	26.5	25.9	27.0	27.6
4H	2H	17.7	19.0	18.2	19.5	20.0	20.1	21.4	20.6	21.9	22.4
	3H	19.2	20.3	19.7	20.8	21.4	22.6	23.7	23.1	24.2	24.8
	4H	19.7	20.7	20.2	21.2	21.8	23.8	24.8	24.3	25.4	26.0
	6H	20.0	20.9	20.5	21.4	22.1	25.1	26.0	25.7	26.6	27.2
	8H	20.1	20.9	20.6	21.5	22.1	25.8	26.6	26.3	27.2	27.8
	12H	20.1	20.9	20.7	21.5	22.1	26.5	27.3	27.1	27.9	28.5
8H	4H	20.4	21.2	21.0	21.8	22.4	24.0	24.8	24.5	25.4	26.0
	6H	20.9	21.6	21.5	22.2	22.9	25.4	26.1	26.0	26.7	27.4
	8H	21.1	21.7	21.7	22.3	23.0	26.2	26.9	26.8	27.5	28.1
	12H	21.2	21.8	21.8	22.4	23.1	27.2	27.7	27.8	28.3	29.0
12H	4H	20.6	21.4	21.2	22.0	22.6	24.0	24.7	24.6	25.3	26.0
	6H	21.2	21.9	21.9	22.5	23.1	25.5	26.1	26.1	26.7	27.4
	8H	21.5	22.1	22.1	22.7	23.4	26.3	26.9	26.9	27.5	28.2

Maximum UGR = 29.0

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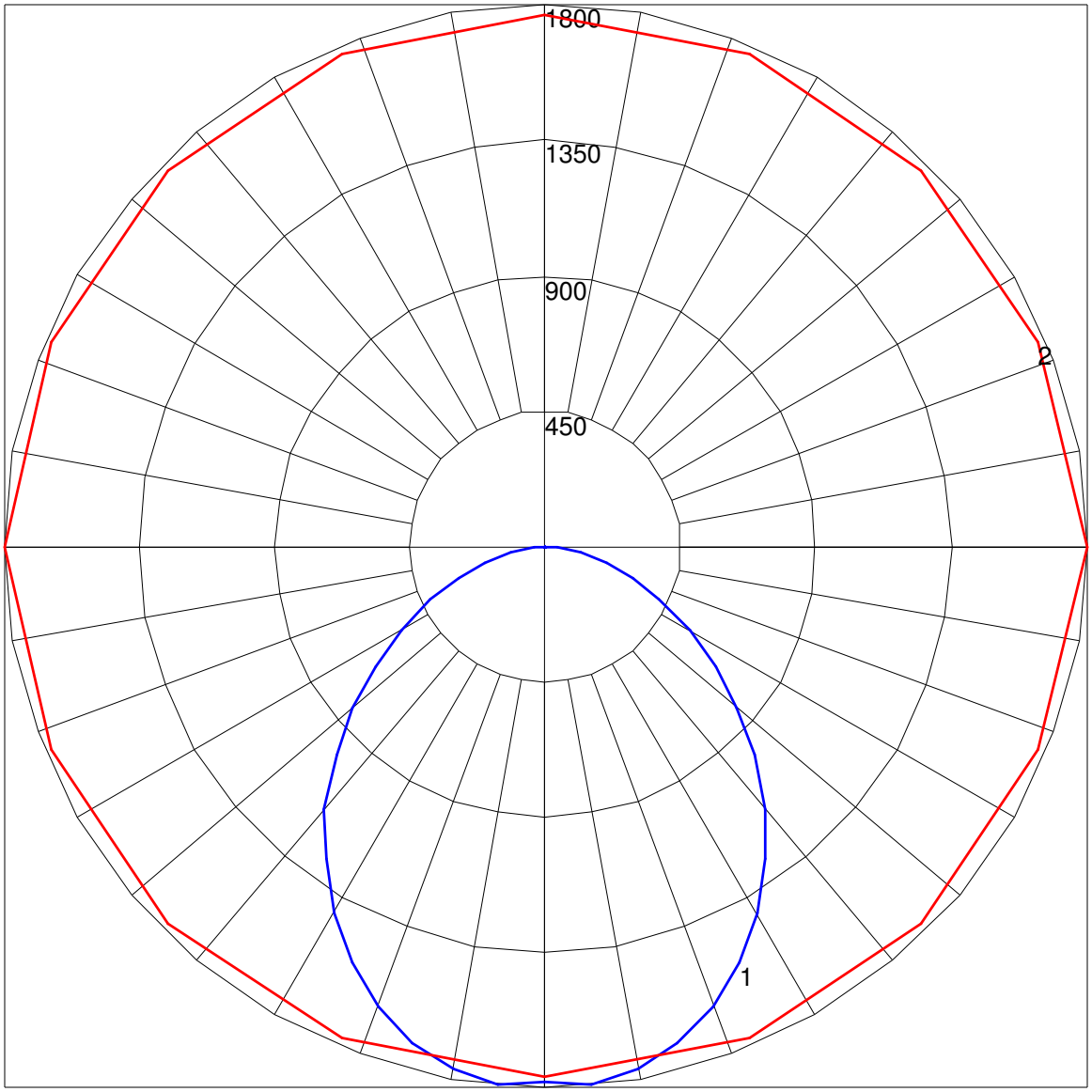
POLAR GRAPH



Maximum Candela = 1799.743 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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