H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-835-(L33)-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] 10-27-2021
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4' LED LENSED LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-4-L52-835-(L33)-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3272
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	146
Total Luminaire Watts	22.4
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	5725	5247	5384
55	4882	4547	4787
65	3927	3767	4145
75	3046	3193	3582
85	1429	2879	3334

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1056.594	1056.594	1056.594	1056.594	1056.594
5	1065.453	1051.483	1048.757	1048.757	1045.691
10	1046.032	1034.106	1034.788	1037.513	1034.106
15	1010.937	1001.737	1009.233	1017.411	1016.388
20	965.620	961.872	974.138	989.130	989.812
25	902.926	907.015	929.162	948.924	954.035
30	836.825	843.981	875.668	901.223	911.104
35	754.369	771.065	812.974	846.366	857.950
40	675.661	693.720	744.148	790.827	801.730
45	582.302	608.538	669.869	720.297	733.926
50	495.076	527.445	594.568	650.107	665.099
55	408.872	440.560	517.564	575.147	592.865
60	327.098	362.874	441.923	495.076	515.179
65	248.390	286.211	363.556	431.360	446.012
70	183.311	216.702	297.795	363.556	380.933
75	124.365	161.505	243.620	302.565	315.513
80	69.168	114.484	194.896	248.390	266.789
85	24.532	77.345	154.690	204.436	219.769
90	0.000	51.109	120.617	169.341	179.222
95	0.000	32.710	95.063	138.676	153.668
100	0.000	21.807	72.916	114.825	126.750
105	0.000	14.651	57.583	92.678	105.966
110	0.000	6.815	45.657	75.982	88.589
115	0.000	4.429	36.458	64.057	72.916
120	0.000	0.000	28.962	52.472	61.672
125	0.000	0.000	22.488	41.909	49.065
130	0.000	0.000	17.718	33.051	39.184
135	0.000	0.000	14.311	25.555	31.347
140	0.000	0.000	7.496	19.421	23.851
145	0.000	0.000	2.726	14.992	17.377
150	0.000	0.000	0.000	12.948	14.651
155	0.000	0.000	0.000	12.266	12.948
160	0.000	0.000	0.000	7.155	11.925
165	0.000	0.000	0.000	2.385	4.089
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	385.01	N.A.	11.80
0-30	812.77	N.A.	24.80
0-40	1319.36	N.A.	40.30
0-60	2288.17	N.A.	69.90
0-80	2890.46	N.A.	88.30
0-90	3045.42	N.A.	93.10
10-90	2945.54	N.A.	90.00
20-40	934.35	N.A.	28.60
20-50	1447.72	N.A.	44.20
40-70	1324.07	N.A.	40.50
60-80	602.29	N.A.	18.40
70-80	247.03	N.A.	7.60
80-90	154.97	N.A.	4.70
90-110	153.20	N.A.	4.70
90-120	188.50	N.A.	5.80
90-130	208.79	N.A.	6.40
90-150	223.96	N.A.	6.80
90-180	226.45	N.A.	6.90
110-180	73.25	N.A.	2.20
0-180	3271.88	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	99.88
10-20	285.13
20-30	427.76
30-40	506.58
40-50	513.38
50-60	455.43
60-70	355.26
70-80	247.03
80-90	154.97
90-100	94.84
100-110	58.36
110-120	35.30
120-130	20.29
130-140	10.73
140-150	4.44
150-160	2.07
160-170	0.43
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	15.0	16.5	15.4	16.9	17.4	18.0	19.5	18.5	19.9	20.4
	3H	16.2	17.5	16.7	18.0	18.5	20.2	21.6	20.7	22.1	22.6
	4H	16.6	17.9	17.1	18.3	18.9	21.3	22.6	21.8	23.1	23.6
	6H	16.8	18.0	17.3	18.5	19.0	22.4	23.6	22.9	24.1	24.6
	8H	16.8	18.0	17.4	18.5	19.1	23.0	24.1	23.5	24.6	25.2
	12H	16.8	17.9	17.4	18.5	19.1	23.6	24.7	24.1	25.2	25.8
4H	2H	15.9	17.2	16.4	17.7	18.2	18.3	19.6	18.8	20.1	20.6
	3H	17.4	18.5	17.9	19.0	19.6	20.8	21.9	21.3	22.4	23.0
	4H	17.9	18.9	18.4	19.4	20.0	22.0	23.0	22.5	23.6	24.2
	6H	18.2	19.1	18.7	19.6	20.3	23.3	24.2	23.9	24.8	25.4
	8H	18.3	19.1	18.8	19.7	20.3	24.0	24.8	24.5	25.4	26.0
	12H	18.3	19.1	18.9	19.7	20.3	24.7	25.5	25.3	26.1	26.7
8H	4H	18.6	19.4	19.2	20.0	20.6	22.2	23.0	22.7	23.6	24.2
	6H	19.1	19.8	19.7	20.4	21.1	23.6	24.3	24.2	24.9	25.6
	8H	19.3	19.9	19.9	20.5	21.2	24.4	25.1	25.0	25.7	26.3
	12H	19.4	20.0	20.0	20.6	21.3	25.4	25.9	26.0	26.5	27.2
12H	4H	18.8	19.6	19.4	20.2	20.8	22.2	22.9	22.8	23.5	24.2
	6H	19.4	20.1	20.1	20.7	21.3	23.7	24.3	24.3	24.9	25.6
	8H	19.7	20.3	20.3	20.9	21.6	24.5	25.1	25.1	25.7	26.4

Maximum UGR = 27.2

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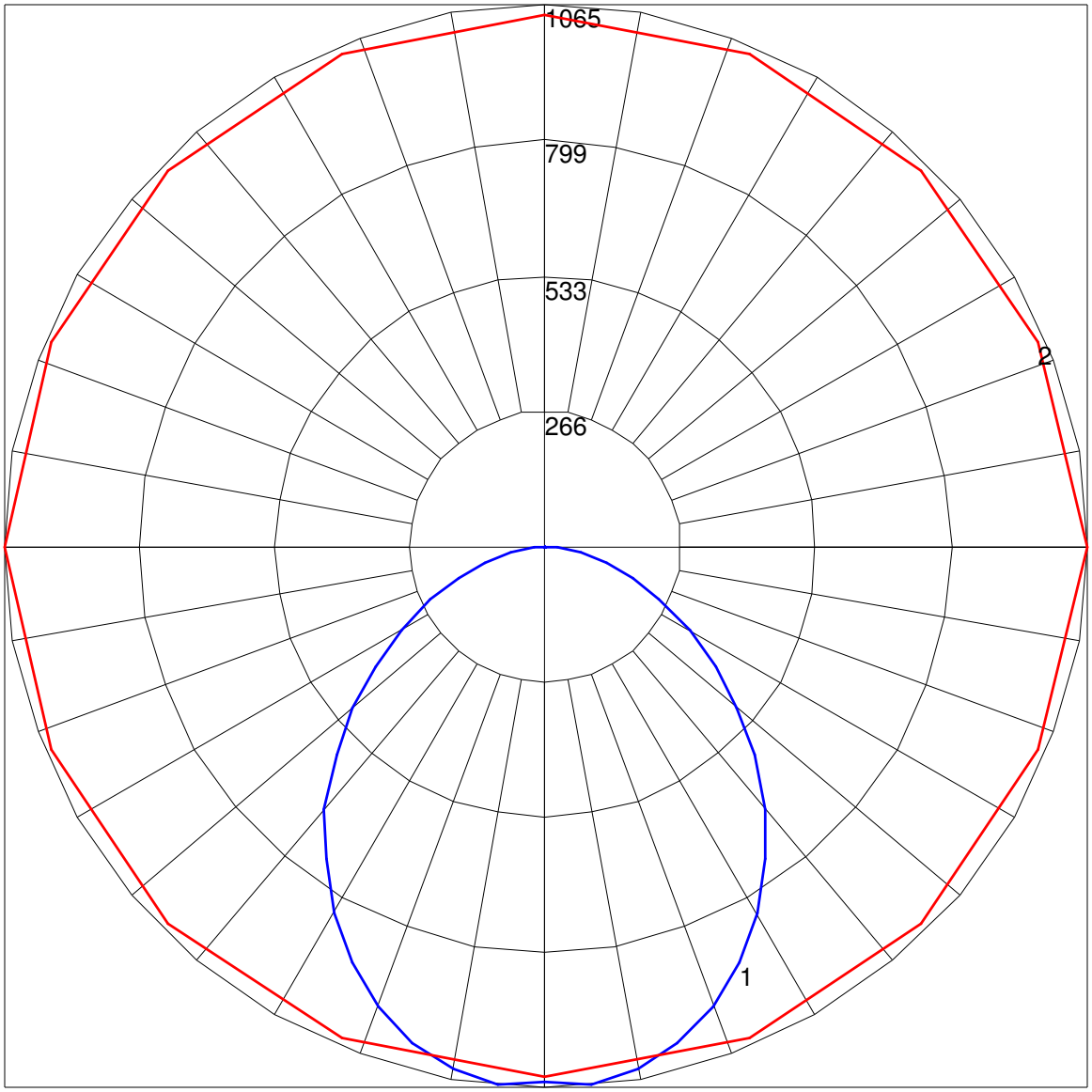
POLAR GRAPH



Maximum Candela = 1065.453 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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