H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-840-(L15)-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] 01-18-2021
[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-L30/840-(L15)-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1549
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	10.9
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	2710	2484	2549
55	2311	2153	2266
65	1859	1783	1962
75	1442	1512	1696
85	677	1363	1579

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	500.203	500.203	500.203	500.203	500.203
5	504.397	497.784	496.493	496.493	495.041
10	495.203	489.557	489.880	491.170	489.557
15	478.588	474.233	477.782	481.653	481.169
20	457.135	455.361	461.168	468.265	468.588
25	427.455	429.391	439.875	449.231	451.651
30	396.162	399.550	414.551	426.649	431.326
35	357.127	365.031	384.871	400.679	406.163
40	319.865	328.415	352.288	374.386	379.548
45	275.668	288.089	317.123	340.996	347.448
50	234.374	249.698	281.475	307.768	314.865
55	193.565	208.566	245.020	272.281	280.669
60	154.852	171.789	209.211	234.374	243.891
65	117.590	135.495	172.111	204.211	211.147
70	86.781	102.589	140.980	172.111	180.338
75	58.876	76.458	115.332	143.238	149.367
80	32.745	54.198	92.266	117.590	126.301
85	11.614	36.616	73.232	96.782	104.041
90	0.000	24.196	57.102	80.168	84.846
95	0.000	15.485	45.004	65.651	72.748
100	0.000	10.323	34.519	54.359	60.005
105	0.000	6.936	27.260	43.875	50.165
110	0.000	3.226	21.615	35.971	41.939
115	0.000	2.097	17.260	30.325	34.519
120	0.000	0.000	13.711	24.841	29.196
125	0.000	0.000	10.646	19.840	23.228
130	0.000	0.000	8.388	15.646	18.550
135	0.000	0.000	6.775	12.098	14.840
140	0.000	0.000	3.549	9.194	11.291
145	0.000	0.000	1.290	7.097	8.226
150	0.000	0.000	0.000	6.130	6.936
155	0.000	0.000	0.000	5.807	6.130
160	0.000	0.000	0.000	3.387	5.646
165	0.000	0.000	0.000	1.129	1.936
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	182.27	N.A.	11.80
0-30	384.78	N.A.	24.80
0-40	624.60	N.A.	40.30
0-60	1083.24	N.A.	69.90
0-80	1368.37	N.A.	88.30
0-90	1441.74	N.A.	93.10
10-90	1394.45	N.A.	90.00
20-40	442.33	N.A.	28.60
20-50	685.37	N.A.	44.20
40-70	626.83	N.A.	40.50
60-80	285.13	N.A.	18.40
70-80	116.95	N.A.	7.60
80-90	73.36	N.A.	4.70
90-110	72.53	N.A.	4.70
90-120	89.24	N.A.	5.80
90-130	98.84	N.A.	6.40
90-150	106.02	N.A.	6.80
90-180	107.20	N.A.	6.90
110-180	34.68	N.A.	2.20
0-180	1548.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	47.29
10-20	134.98
20-30	202.51
30-40	239.82
40-50	243.04
50-60	215.61
60-70	168.18
70-80	116.95
80-90	73.36
90-100	44.90
100-110	27.63
110-120	16.71
120-130	9.60
130-140	5.08
140-150	2.10
150-160	0.98
160-170	0.20
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	12.4	13.9	12.8	14.3	14.8	15.4	16.9	15.9	17.3	17.8
	3H	13.6	14.9	14.1	15.4	15.9	17.6	19.0	18.1	19.5	20.0
	4H	14.0	15.3	14.5	15.7	16.3	18.7	20.0	19.2	20.5	21.0
	6H	14.2	15.4	14.7	15.9	16.4	19.8	21.0	20.3	21.5	22.0
	8H	14.2	15.4	14.8	15.9	16.5	20.4	21.5	20.9	22.0	22.6
	12H	14.2	15.3	14.8	15.9	16.5	21.0	22.1	21.5	22.6	23.2
4H	2H	13.3	14.6	13.8	15.1	15.6	15.7	17.0	16.2	17.5	18.0
	3H	14.8	15.9	15.3	16.4	17.0	18.2	19.3	18.7	19.8	20.4
	4H	15.3	16.3	15.8	16.8	17.4	19.4	20.4	19.9	21.0	21.6
	6H	15.6	16.5	16.1	17.0	17.7	20.7	21.6	21.3	22.2	22.8
	8H	15.7	16.5	16.2	17.1	17.7	21.4	22.2	21.9	22.8	23.4
	12H	15.7	16.5	16.3	17.1	17.7	22.1	22.9	22.7	23.5	24.1
8H	4H	16.0	16.8	16.6	17.4	18.0	19.6	20.4	20.1	21.0	21.6
	6H	16.5	17.2	17.1	17.8	18.5	21.0	21.7	21.6	22.3	23.0
	8H	16.7	17.3	17.3	17.9	18.6	21.8	22.5	22.4	23.1	23.7
	12H	16.8	17.4	17.4	18.0	18.7	22.8	23.3	23.4	23.9	24.6
12H	4H	16.2	17.0	16.8	17.6	18.2	19.6	20.3	20.2	20.9	21.6
	6H	16.8	17.5	17.5	18.1	18.7	21.1	21.7	21.7	22.3	23.0
	8H	17.1	17.7	17.7	18.3	19.0	21.9	22.5	22.5	23.1	23.8

Maximum UGR = 24.6

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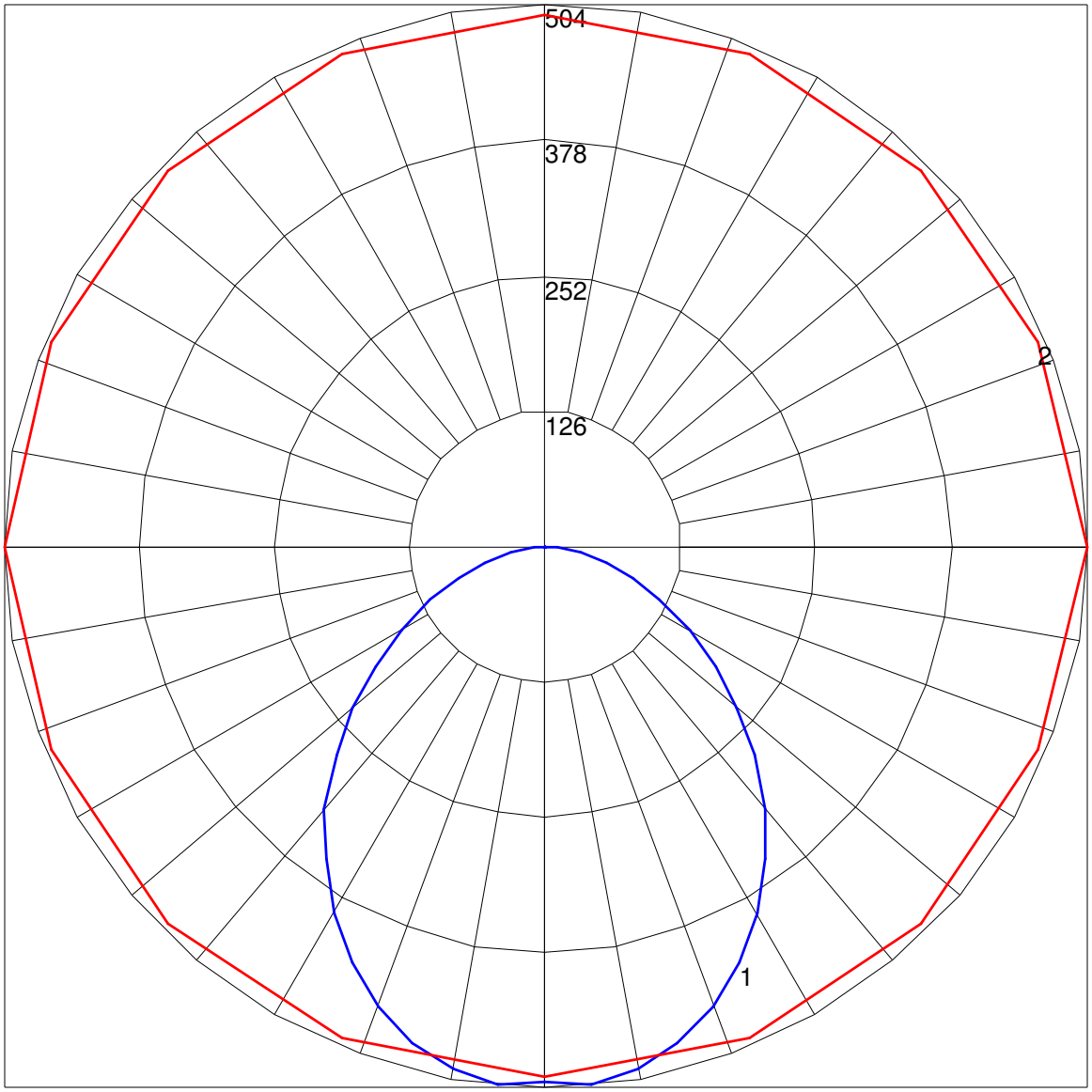
POLAR GRAPH



Maximum Candela = 504.397 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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