H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L72-840-EM10W-DRV-UNV_(EMER MODE).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] 07-14-2023
[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-EM10W-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1440
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	10
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	2520	2309	2370
55	2148	2001	2107
65	1728	1658	1824
75	1341	1405	1576
85	629	1267	1467

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	465.005	465.005	465.005	465.005	465.005
5	468.903	462.755	461.556	461.556	460.206
10	460.356	455.108	455.408	456.607	455.108
15	444.911	440.862	444.161	447.760	447.310
20	424.967	423.318	428.716	435.314	435.614
25	397.376	399.175	408.922	417.619	419.869
30	368.285	371.434	385.379	396.626	400.975
35	331.996	339.344	357.788	372.483	377.582
40	297.357	305.305	327.498	348.041	352.840
45	256.270	267.816	294.808	317.001	322.999
50	217.882	232.127	261.668	286.111	292.708
55	179.944	193.889	227.779	253.121	260.918
60	143.955	159.700	194.489	217.882	226.729
65	109.316	125.961	160.000	189.841	196.289
70	80.675	95.370	131.059	160.000	167.648
75	54.733	71.078	107.216	133.158	138.857
80	30.440	50.384	85.773	109.316	117.413
85	10.797	34.039	68.079	89.972	96.720
90	0.000	22.493	53.083	74.527	78.875
95	0.000	14.395	41.837	61.031	67.629
100	0.000	9.597	32.090	50.534	55.783
105	0.000	6.448	25.342	40.787	46.635
110	0.000	2.999	20.094	33.440	38.988
115	0.000	1.949	16.045	28.191	32.090
120	0.000	0.000	12.746	23.093	27.142
125	0.000	0.000	9.897	18.444	21.593
130	0.000	0.000	7.798	14.545	17.245
135	0.000	0.000	6.298	11.246	13.796
140	0.000	0.000	3.299	8.547	10.497
145	0.000	0.000	1.200	6.598	7.648
150	0.000	0.000	0.000	5.698	6.448
155	0.000	0.000	0.000	5.398	5.698
160	0.000	0.000	0.000	3.149	5.248
165	0.000	0.000	0.000	1.050	1.799
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	169.44	N.A.	11.80
0-30	357.70	N.A.	24.80
0-40	580.65	N.A.	40.30
0-60	1007.02	N.A.	69.90
0-80	1272.08	N.A.	88.30
0-90	1340.28	N.A.	93.10
10-90	1296.33	N.A.	90.00
20-40	411.20	N.A.	28.60
20-50	637.14	N.A.	44.20
40-70	582.72	N.A.	40.50
60-80	265.07	N.A.	18.40
70-80	108.72	N.A.	7.60
80-90	68.20	N.A.	4.70
90-110	67.42	N.A.	4.70
90-120	82.96	N.A.	5.80
90-130	91.89	N.A.	6.40
90-150	98.56	N.A.	6.80
90-180	99.66	N.A.	6.90
110-180	32.24	N.A.	2.20
0-180	1439.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	43.96
10-20	125.48
20-30	188.26
30-40	222.95
40-50	225.94
50-60	200.43
60-70	156.35
70-80	108.72
80-90	68.20
90-100	41.74
100-110	25.68
110-120	15.54
120-130	8.93
130-140	4.72
140-150	1.95
150-160	0.91
160-170	0.19
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	12.2	13.7	12.6	14.1	14.6	15.2	16.7	15.7	17.1	17.6
	3H	13.4	14.7	13.9	15.2	15.7	17.4	18.8	17.9	19.3	19.8
	4H	13.8	15.1	14.3	15.5	16.1	18.5	19.8	19.0	20.3	20.8
	6H	14.0	15.2	14.5	15.7	16.2	19.6	20.8	20.1	21.3	21.8
	8H	14.0	15.2	14.6	15.7	16.3	20.2	21.3	20.7	21.8	22.4
	12H	14.0	15.1	14.6	15.7	16.3	20.8	21.9	21.3	22.4	23.0
4H	2H	13.1	14.4	13.6	14.9	15.4	15.5	16.8	16.0	17.3	17.8
	3H	14.6	15.7	15.1	16.2	16.8	18.0	19.1	18.5	19.6	20.2
	4H	15.1	16.1	15.6	16.6	17.2	19.2	20.2	19.7	20.8	21.4
	6H	15.4	16.3	15.9	16.8	17.5	20.5	21.4	21.1	22.0	22.6
	8H	15.5	16.3	16.0	16.9	17.5	21.2	22.0	21.7	22.6	23.2
	12H	15.5	16.3	16.1	16.9	17.5	21.9	22.7	22.5	23.3	23.9
8H	4H	15.8	16.6	16.4	17.2	17.8	19.4	20.2	19.9	20.8	21.4
	6H	16.3	17.0	16.9	17.6	18.3	20.8	21.5	21.4	22.1	22.8
	8H	16.5	17.1	17.1	17.7	18.4	21.6	22.3	22.2	22.9	23.5
	12H	16.6	17.2	17.2	17.8	18.5	22.6	23.1	23.2	23.7	24.4
12H	4H	16.0	16.8	16.6	17.4	18.0	19.4	20.1	20.0	20.7	21.4
	6H	16.6	17.3	17.3	17.9	18.5	20.9	21.5	21.5	22.1	22.8
	8H	16.9	17.5	17.5	18.1	18.8	21.7	22.3	22.3	22.9	23.6

Maximum UGR = 24.4

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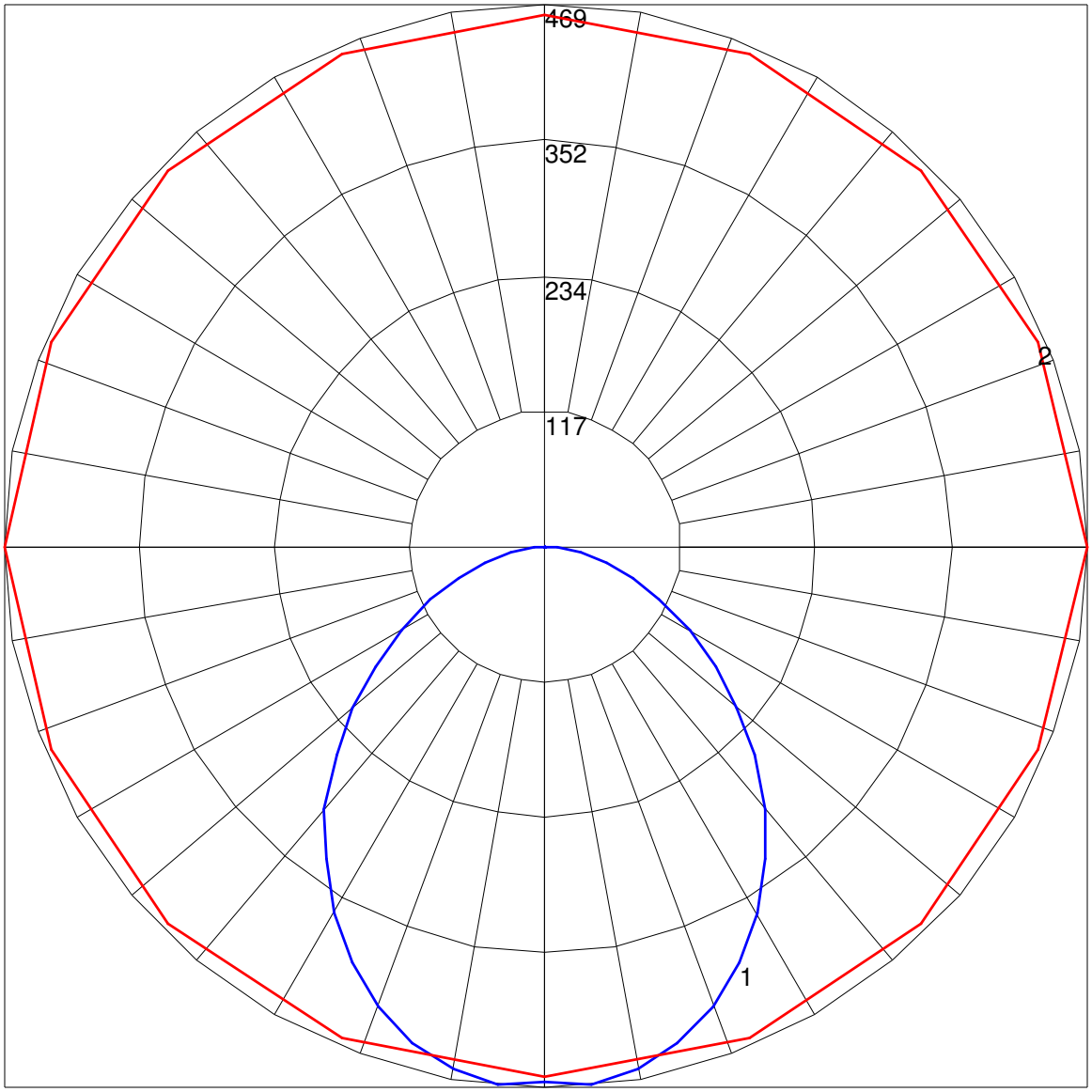
POLAR GRAPH



Maximum Candela = 468.903 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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