H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-940-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] 04-04-2024
[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-L30-940-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2530
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	19.4
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	4427	4057	4163
55	3775	3516	3702
65	3036	2912	3205
75	2355	2469	2769
85	1105	2226	2578

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-940-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	816.987	816.987	816.987	816.987	816.987
5	823.837	813.035	810.928	810.928	808.557
10	808.820	799.599	800.126	802.234	799.599
15	781.684	774.570	780.366	786.689	785.899
20	746.644	743.746	753.230	764.822	765.349
25	698.167	701.329	718.453	733.734	737.686
30	647.056	652.589	677.090	696.850	704.490
35	583.299	596.208	628.614	654.433	663.391
40	522.440	536.403	575.395	611.489	619.920
45	450.252	470.538	517.961	556.953	567.491
50	382.806	407.835	459.736	502.680	514.273
55	316.151	340.653	400.195	444.719	458.419
60	252.921	280.584	341.707	382.806	398.350
65	192.062	221.306	281.111	333.539	344.868
70	141.741	167.560	230.263	281.111	294.547
75	96.163	124.880	188.373	233.952	243.963
80	53.482	88.522	150.699	192.062	206.289
85	18.969	59.805	119.611	158.076	169.931
90	0.000	39.519	93.265	130.939	138.580
95	0.000	25.292	73.505	107.228	118.820
100	0.000	16.861	56.380	88.786	98.007
105	0.000	11.329	44.525	71.661	81.936
110	0.000	5.269	35.304	58.751	68.499
115	0.000	3.425	28.190	49.530	56.380
120	0.000	0.000	22.394	40.573	47.686
125	0.000	0.000	17.388	32.405	37.938
130	0.000	0.000	13.700	25.556	30.298
135	0.000	0.000	11.065	19.759	24.238
140	0.000	0.000	5.796	15.017	18.442
145	0.000	0.000	2.108	11.592	13.436
150	0.000	0.000	0.000	10.011	11.329
155	0.000	0.000	0.000	9.485	10.011
160	0.000	0.000	0.000	5.533	9.221
165	0.000	0.000	0.000	1.844	3.162
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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-940-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	297.70	N.A.	11.80
0-30	628.46	N.A.	24.80
0-40	1020.16	N.A.	40.30
0-60	1769.27	N.A.	69.90
0-80	2234.98	N.A.	88.30
0-90	2354.8	N.A.	93.10
10-90	2277.57	N.A.	90.00
20-40	722.46	N.A.	28.60
20-50	1119.42	N.A.	44.20
40-70	1023.81	N.A.	40.50
60-80	465.71	N.A.	18.40
70-80	191.01	N.A.	7.60
80-90	119.83	N.A.	4.70
90-110	118.46	N.A.	4.70
90-120	145.75	N.A.	5.80
90-130	161.44	N.A.	6.40
90-150	173.17	N.A.	6.80
90-180	175.10	N.A.	6.90
110-180	56.64	N.A.	2.20
0-180	2529.9	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	77.23
10-20	220.47
20-30	330.76
30-40	391.70
40-50	396.96
50-60	352.15
60-70	274.70
70-80	191.01
80-90	119.83
90-100	73.33
100-110	45.12
110-120	27.30
120-130	15.69
130-140	8.30
140-150	3.43
150-160	1.60
160-170	0.33
170-180	0.00

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-940-DIM-UNV_.IES

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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-940-DIM-UNV_.IES

UGR TABLE - CORRECTED

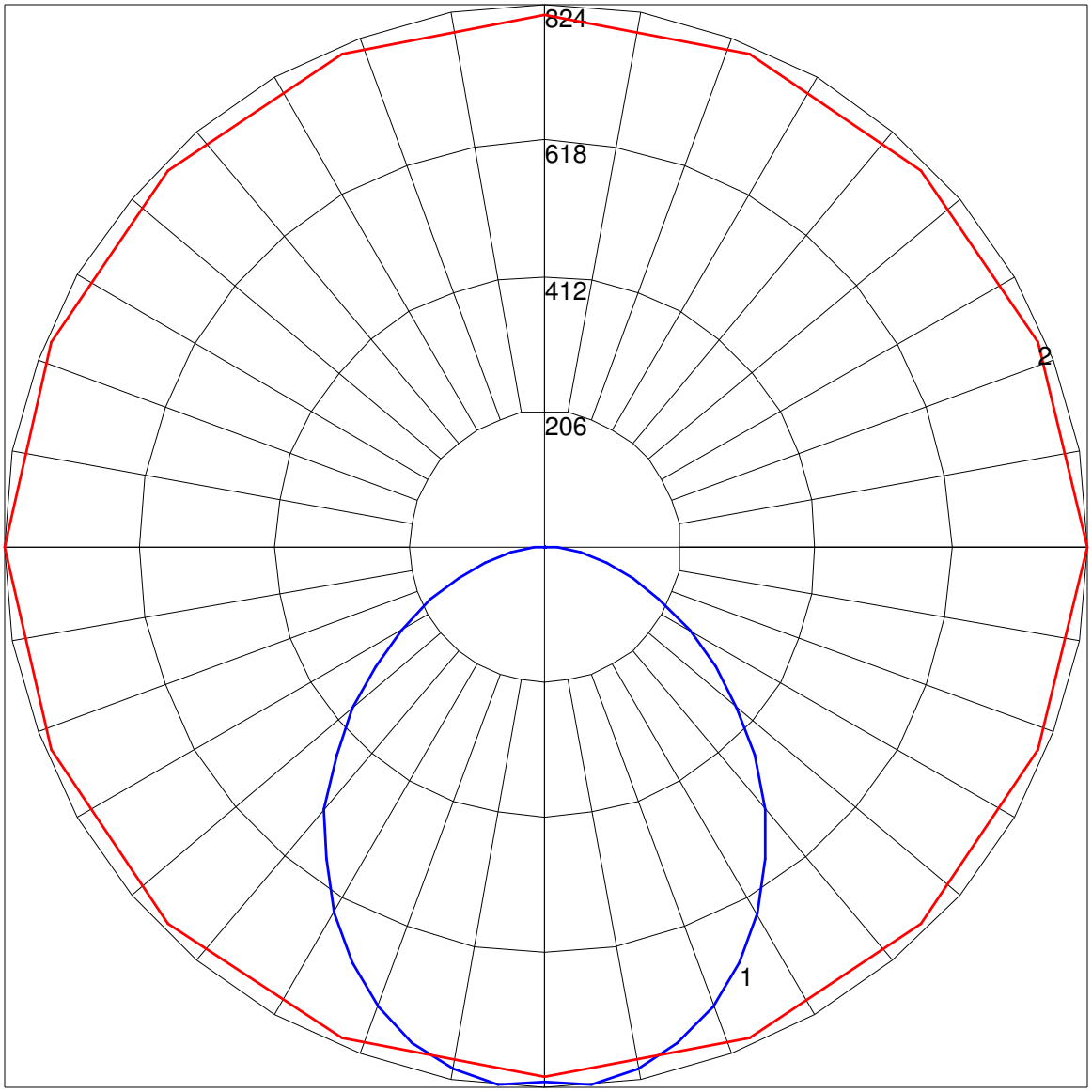
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	14.1	15.6	14.5	16.0	16.5	17.1	18.6	17.6	19.0	19.5
	3H	15.3	16.6	15.8	17.1	17.6	19.3	20.7	19.8	21.2	21.7
	4H	15.7	17.0	16.2	17.4	18.0	20.4	21.7	20.9	22.2	22.7
	6H	15.9	17.1	16.4	17.6	18.1	21.5	22.7	22.0	23.2	23.7
	8H	15.9	17.1	16.5	17.6	18.2	22.1	23.2	22.6	23.7	24.3
	12H	15.9	17.0	16.5	17.6	18.2	22.7	23.8	23.2	24.3	24.9
4H	2H	15.0	16.3	15.5	16.8	17.3	17.4	18.7	17.9	19.2	19.7
	3H	16.5	17.6	17.0	18.1	18.7	19.9	21.0	20.4	21.5	22.1
	4H	17.0	18.0	17.5	18.5	19.1	21.1	22.1	21.6	22.7	23.3
	6H	17.3	18.2	17.8	18.7	19.4	22.4	23.3	23.0	23.9	24.5
	8H	17.4	18.2	17.9	18.8	19.4	23.1	23.9	23.6	24.5	25.1
	12H	17.4	18.2	18.0	18.8	19.4	23.8	24.6	24.4	25.2	25.8
8H	4H	17.7	18.5	18.3	19.1	19.7	21.3	22.1	21.8	22.7	23.3
	6H	18.2	18.9	18.8	19.5	20.2	22.7	23.4	23.3	24.0	24.7
	8H	18.4	19.0	19.0	19.6	20.3	23.5	24.2	24.1	24.8	25.4
	12H	18.5	19.1	19.1	19.7	20.4	24.5	25.0	25.1	25.6	26.3
12H	4H	17.9	18.7	18.5	19.3	19.9	21.3	22.0	21.9	22.6	23.3
	6H	18.5	19.2	19.2	19.8	20.4	22.8	23.4	23.4	24.0	24.7
	8H	18.8	19.4	19.4	20.0	20.7	23.6	24.2	24.2	24.8	25.5

Maximum UGR = 26.3

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-940-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 823.837 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.)

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.