H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-850-DRV-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] 06-30-2023
[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-L52-850-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5419
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	35.8
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	9481	8690	8917
55	8085	7530	7929
65	6503	6238	6865
75	5044	5289	5932
85	2367	4768	5522

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-L52-850-DRV-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1749.848	1749.848	1749.848	1749.848	1749.848
5	1764.520	1741.384	1736.870	1736.870	1731.791
10	1732.355	1712.605	1713.734	1718.248	1712.605
15	1674.234	1658.998	1671.412	1684.955	1683.262
20	1599.184	1592.977	1613.291	1638.120	1639.248
25	1495.356	1502.127	1538.805	1571.534	1579.998
30	1385.884	1397.734	1450.213	1492.534	1508.898
35	1249.327	1276.977	1346.384	1401.684	1420.870
40	1118.977	1148.884	1232.399	1309.706	1327.763
45	964.363	1007.813	1109.385	1192.899	1215.470
50	819.906	873.513	984.677	1076.656	1101.485
55	677.142	729.621	857.149	952.513	981.856
60	541.714	600.964	731.878	819.906	853.199
65	411.364	473.999	602.092	714.385	738.649
70	303.585	358.885	493.185	602.092	630.871
75	205.964	267.471	403.464	501.085	522.528
80	114.550	189.600	322.771	411.364	441.835
85	40.629	128.093	256.185	338.571	363.964
90	0.000	84.643	199.757	280.450	296.814
95	0.000	54.171	157.436	229.664	254.493
100	0.000	36.114	120.757	190.164	209.914
105	0.000	24.264	95.364	153.486	175.493
110	0.000	11.286	75.614	125.836	146.714
115	0.000	7.336	60.379	106.086	120.757
120	0.000	0.000	47.964	86.900	102.136
125	0.000	0.000	37.243	69.407	81.257
130	0.000	0.000	29.343	54.736	64.893
135	0.000	0.000	23.700	42.321	51.914
140	0.000	0.000	12.414	32.164	39.500
145	0.000	0.000	4.514	24.829	28.779
150	0.000	0.000	0.000	21.443	24.264
155	0.000	0.000	0.000	20.314	21.443
160	0.000	0.000	0.000	11.850	19.750
165	0.000	0.000	0.000	3.950	6.771
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-L52-850-DRV-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	637.62	N.A.	11.80
0-30	1346.05	N.A.	24.80
0-40	2185.01	N.A.	40.30
0-60	3789.48	N.A.	69.90
0-80	4786.95	N.A.	88.30
0-90	5043.59	N.A.	93.10
10-90	4878.17	N.A.	90.00
20-40	1547.39	N.A.	28.60
20-50	2397.61	N.A.	44.20
40-70	2192.82	N.A.	40.50
60-80	997.46	N.A.	18.40
70-80	409.11	N.A.	7.60
80-90	256.65	N.A.	4.70
90-110	253.71	N.A.	4.70
90-120	312.18	N.A.	5.80
90-130	345.78	N.A.	6.40
90-150	370.90	N.A.	6.80
90-180	375.03	N.A.	6.90
110-180	121.32	N.A.	2.20
0-180	5418.62	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	165.42
10-20	472.21
20-30	708.43
30-40	838.96
40-50	850.22
50-60	754.25
60-70	588.35
70-80	409.11
80-90	256.65
90-100	157.06
100-110	96.65
110-120	58.47
120-130	33.60
130-140	17.77
140-150	7.35
150-160	3.43
160-170	0.71
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-L52-850-DRV-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	87	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-L52-850-DRV-UNV_.IES

UGR TABLE - CORRECTED

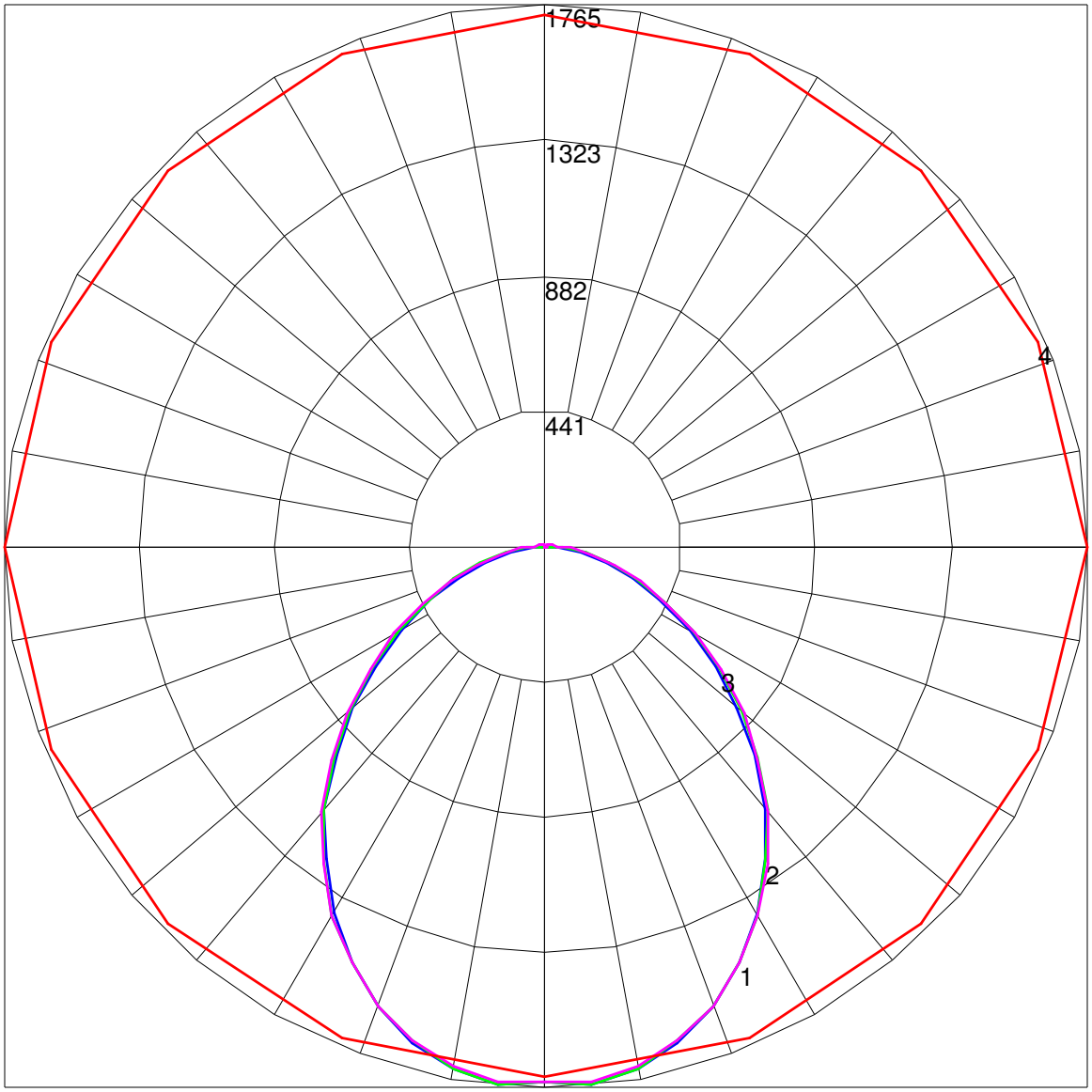
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.8	18.3	17.2	18.7	19.2	19.8	21.3	20.3	21.7	22.2
	3H	18.0	19.3	18.5	19.8	20.3	22.0	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

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-L52-850-DRV-UNV_.IES

POLAR GRAPH



Maximum Candela = 1764.52 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (5 - 185)
3 - Vertical Plane Through Horizontal Angles (10 - 190)
4 - 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.