H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-835-EM10W-DIM-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] 03-04-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4' LENSED LED STRIP LUMINAIRE
[MORE] WHITE REFLECTOR w/ FROST ACRYLIC LENS
[LUMCAT] 76R-4-L52-835-EM10W-DIM-UNV (EMER MODE)
[LAMPCAT] HLMX 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	143
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	14
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	249	229	235
55	213	198	209
65	171	164	181
75	133	139	156
85	62	125	145

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	46.031	46.031	46.031	46.031	46.031
5	46.417	45.808	45.690	45.690	45.556
10	45.571	45.051	45.081	45.200	45.051
15	44.042	43.641	43.968	44.324	44.280
20	42.068	41.905	42.439	43.092	43.122
25	39.337	39.515	40.480	41.340	41.563
30	36.457	36.769	38.149	39.262	39.693
35	32.865	33.592	35.418	36.872	37.377
40	29.436	30.222	32.419	34.453	34.928
45	25.368	26.511	29.183	31.380	31.974
50	21.568	22.978	25.903	28.322	28.975
55	17.813	19.193	22.548	25.057	25.829
60	14.250	15.809	19.253	21.568	22.444
65	10.821	12.469	15.839	18.792	19.431
70	7.986	9.441	12.974	15.839	16.596
75	5.418	7.036	10.613	13.181	13.746
80	3.013	4.988	8.491	10.821	11.623
85	1.069	3.370	6.739	8.906	9.574
90	0.000	2.227	5.255	7.377	7.808
95	0.000	1.425	4.141	6.041	6.695
100	0.000	0.950	3.177	5.002	5.522
105	0.000	0.638	2.509	4.038	4.616
110	0.000	0.297	1.989	3.310	3.859
115	0.000	0.193	1.588	2.791	3.177
120	0.000	0.000	1.262	2.286	2.687
125	0.000	0.000	0.980	1.826	2.138
130	0.000	0.000	0.772	1.440	1.707
135	0.000	0.000	0.623	1.113	1.366
140	0.000	0.000	0.327	0.846	1.039
145	0.000	0.000	0.119	0.653	0.757
150	0.000	0.000	0.000	0.564	0.638
155	0.000	0.000	0.000	0.534	0.564
160	0.000	0.000	0.000	0.312	0.520
165	0.000	0.000	0.000	0.104	0.178
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	16.77	N.A.	11.80
0-30	35.41	N.A.	24.80
0-40	57.48	N.A.	40.30
0-60	99.69	N.A.	69.90
0-80	125.92	N.A.	88.30
0-90	132.68	N.A.	93.10
10-90	128.32	N.A.	90.00
20-40	40.71	N.A.	28.60
20-50	63.07	N.A.	44.20
40-70	57.68	N.A.	40.50
60-80	26.24	N.A.	18.40
70-80	10.76	N.A.	7.50
80-90	6.75	N.A.	4.70
90-110	6.67	N.A.	4.70
90-120	8.21	N.A.	5.80
90-130	9.10	N.A.	6.40
90-150	9.76	N.A.	6.80
90-180	9.87	N.A.	6.90
110-180	3.19	N.A.	2.20
0-180	142.54	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	4.35
10-20	12.42
20-30	18.64
30-40	22.07
40-50	22.37
50-60	19.84
60-70	15.48
70-80	10.76
80-90	6.75
90-100	4.13
100-110	2.54
110-120	1.54
120-130	0.88
130-140	0.47
140-150	0.19
150-160	0.09
160-170	0.02
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	113	113	113	113	107	107	107	101	101	101	95	95	95	93
1	106	100	96	91	102	97	93	89	92	88	85	87	84	81	82	80	78	75
2	96	87	80	74	92	85	78	72	80	74	70	76	71	67	72	68	65	62
3	87	76	68	61	84	74	66	60	70	64	58	67	61	56	63	59	55	52
4	80	68	59	52	77	66	58	51	62	55	50	59	53	48	56	51	47	44
5	73	60	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	28	23	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	4.0	5.5	4.5	6.0	6.5	7.0	8.6	7.5	9.0	9.5
	3H	5.2	6.6	5.7	7.1	7.6	9.3	10.7	9.8	11.1	11.7
	4H	5.6	6.9	6.1	7.4	8.0	10.4	11.7	10.9	12.1	12.7
	6H	5.9	7.1	6.4	7.6	8.1	11.5	12.7	12.0	13.2	13.7
	8H	5.9	7.1	6.4	7.6	8.2	12.0	13.2	12.6	13.7	14.3
	12H	5.9	7.0	6.5	7.5	8.1	12.6	13.7	13.2	14.3	14.8
4H	2H	5.0	6.3	5.5	6.8	7.3	7.4	8.7	7.9	9.2	9.7
	3H	6.4	7.5	7.0	8.1	8.6	9.9	11.0	10.4	11.5	12.1
	4H	6.9	7.9	7.5	8.5	9.1	11.1	12.1	11.6	12.6	13.2
	6H	7.3	8.2	7.8	8.7	9.3	12.4	13.3	12.9	13.8	14.4
	8H	7.3	8.2	7.9	8.7	9.4	13.1	13.9	13.6	14.5	15.1
	12H	7.4	8.1	8.0	8.7	9.4	13.8	14.6	14.4	15.1	15.8
8H	4H	7.7	8.5	8.2	9.1	9.7	11.3	12.1	11.8	12.7	13.3
	6H	8.2	8.9	8.8	9.5	10.1	12.7	13.4	13.3	14.0	14.7
	8H	8.4	9.0	9.0	9.6	10.2	13.5	14.2	14.1	14.8	15.4
	12H	8.5	9.0	9.1	9.6	10.3	14.4	15.0	15.1	15.6	16.3
12H	4H	7.9	8.6	8.5	9.2	9.9	11.3	12.0	11.8	12.6	13.2
	6H	8.5	9.2	9.1	9.7	10.4	12.7	13.4	13.4	14.0	14.7
	8H	8.8	9.3	9.4	9.9	10.7	13.6	14.2	14.2	14.8	15.5

Maximum UGR = 16.3

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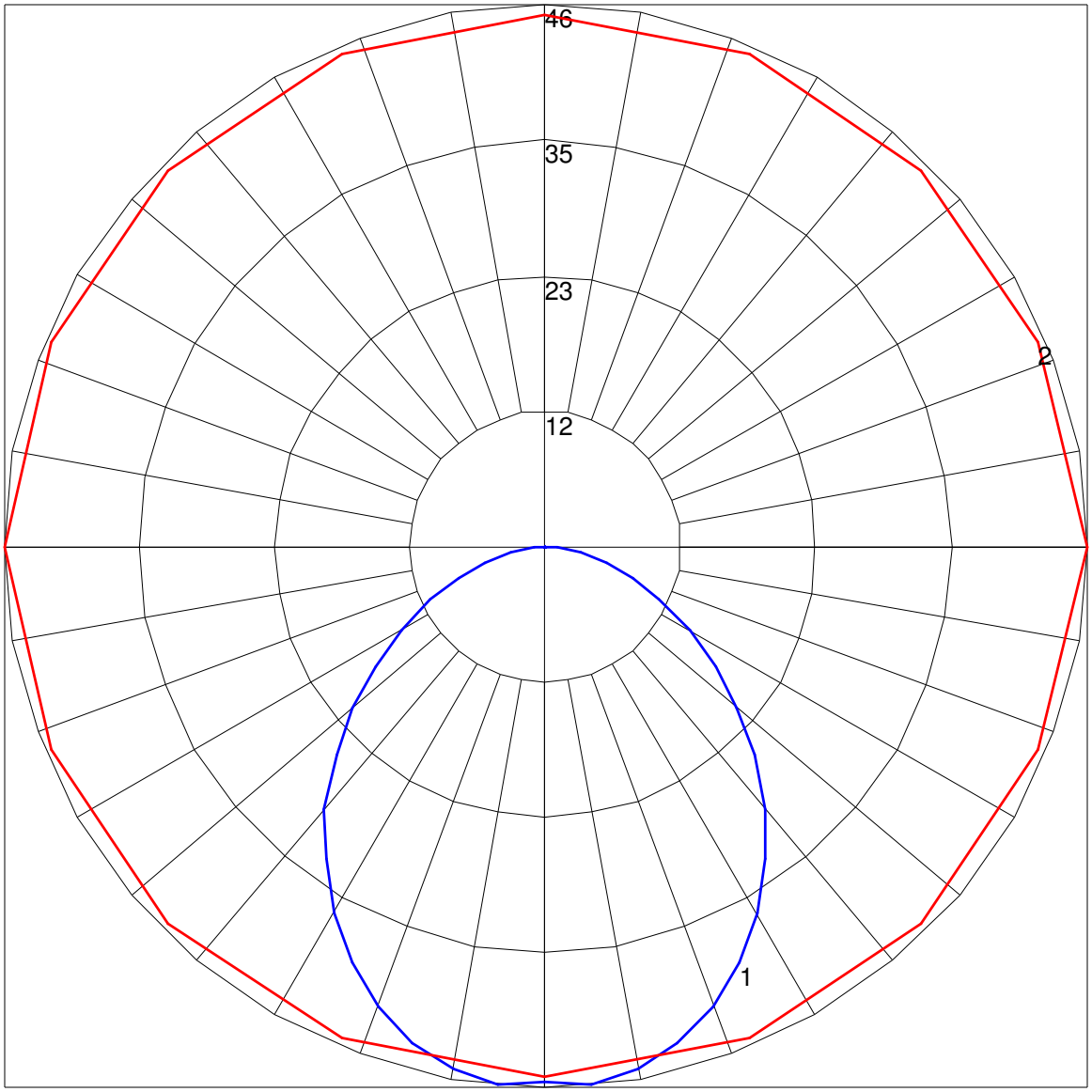
POLAR GRAPH



Maximum Candela = 46.417 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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