H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L72-835-(L55)-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] 24-APRIL-2020
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4' LED SURFACE STRIP LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-4-L72-835-(L55)-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5403
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	38
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	9454	8664	8891
55	8061	7508	7905
65	6484	6220	6845
75	5030	5273	5914
85	2360	4754	5506

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1744.736	1744.736	1744.736	1744.736	1744.736
5	1759.365	1736.297	1731.796	1731.796	1726.732
10	1727.295	1707.602	1708.728	1713.229	1707.602
15	1669.343	1654.152	1666.530	1680.033	1678.345
20	1594.512	1588.323	1608.578	1633.334	1634.460
25	1490.987	1497.739	1534.310	1566.943	1575.383
30	1381.836	1393.651	1445.976	1488.174	1504.490
35	1245.678	1273.247	1342.451	1397.589	1416.719
40	1115.709	1145.528	1228.798	1305.880	1323.884
45	961.546	1004.869	1106.144	1189.414	1211.919
50	817.511	870.962	981.801	1073.511	1098.267
55	675.164	727.489	854.645	949.731	978.988
60	540.131	599.208	729.740	817.511	850.707
65	410.162	472.615	600.333	712.298	736.491
70	302.699	357.837	491.744	600.333	629.028
75	205.362	266.690	402.285	499.621	521.002
80	114.215	189.046	321.828	410.162	440.545
85	40.510	127.719	255.437	337.582	362.901
90	0.000	84.396	199.173	279.630	295.947
95	0.000	54.013	156.976	228.993	253.749
100	0.000	36.009	120.404	189.609	209.301
105	0.000	24.193	95.086	153.037	174.980
110	0.000	11.253	75.393	125.468	146.286
115	0.000	7.314	60.202	105.776	120.404
120	0.000	0.000	47.824	86.646	101.837
125	0.000	0.000	37.134	69.204	81.020
130	0.000	0.000	29.257	54.576	64.703
135	0.000	0.000	23.631	42.198	51.763
140	0.000	0.000	12.378	32.070	39.385
145	0.000	0.000	4.501	24.756	28.694
150	0.000	0.000	0.000	21.380	24.193
155	0.000	0.000	0.000	20.255	21.380
160	0.000	0.000	0.000	11.815	19.692
165	0.000	0.000	0.000	3.938	6.752
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	635.76	N.A.	11.80
0-30	1342.12	N.A.	24.80
0-40	2178.63	N.A.	40.30
0-60	3778.41	N.A.	69.90
0-80	4772.96	N.A.	88.30
0-90	5028.86	N.A.	93.10
10-90	4863.92	N.A.	90.00
20-40	1542.87	N.A.	28.60
20-50	2390.6	N.A.	44.20
40-70	2186.42	N.A.	40.50
60-80	994.55	N.A.	18.40
70-80	407.91	N.A.	7.50
80-90	255.90	N.A.	4.70
90-110	252.97	N.A.	4.70
90-120	311.27	N.A.	5.80
90-130	344.77	N.A.	6.40
90-150	369.81	N.A.	6.80
90-180	373.94	N.A.	6.90
110-180	120.96	N.A.	2.20
0-180	5402.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	164.94
10-20	470.83
20-30	706.36
30-40	836.51
40-50	847.73
50-60	752.05
60-70	586.63
70-80	407.91
80-90	255.90
90-100	156.61
100-110	96.37
110-120	58.30
120-130	33.50
130-140	17.72
140-150	7.33
150-160	3.42
160-170	0.71
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	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

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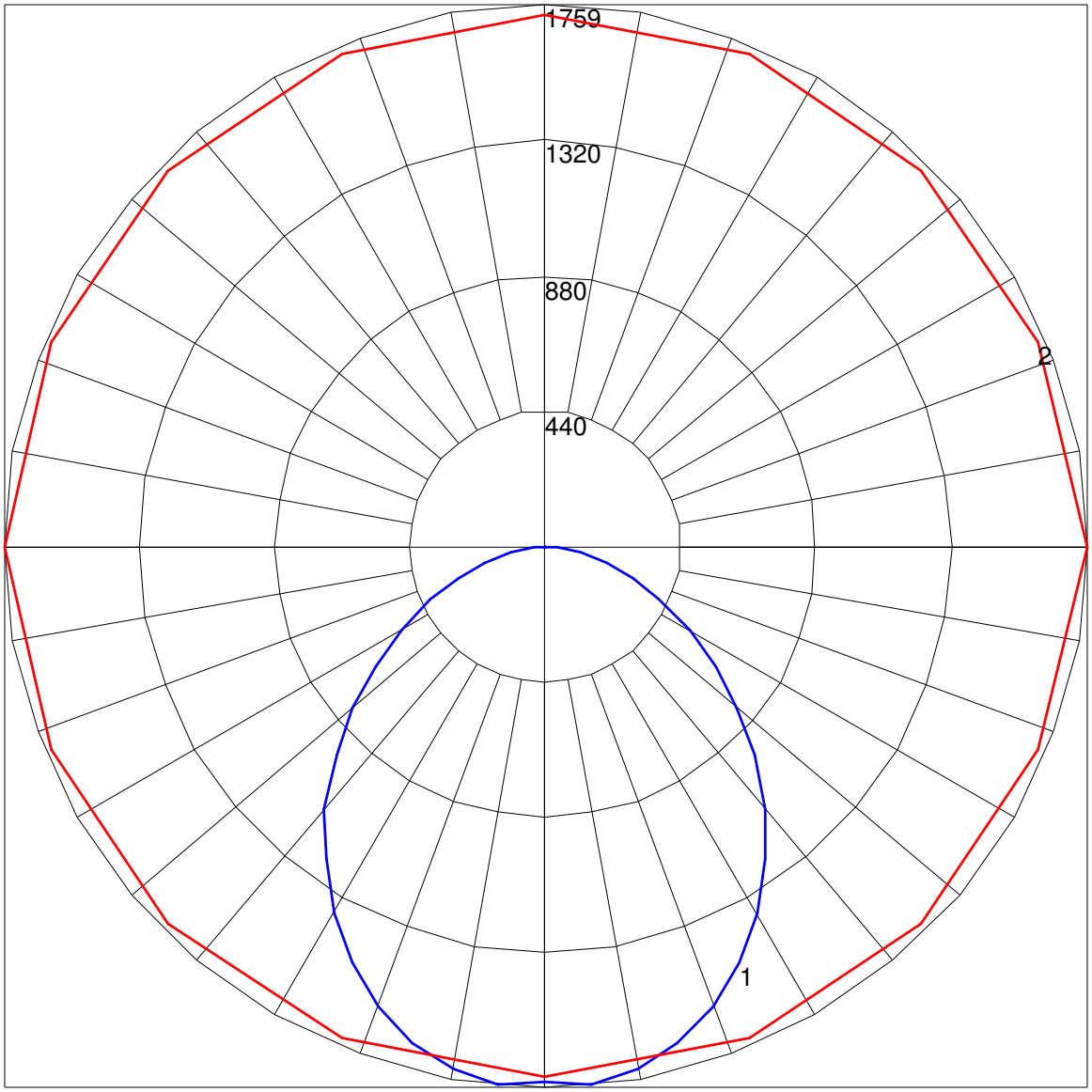
POLAR GRAPH



Maximum Candela = 1759.365 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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