H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-835-(L44)-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] 10-27-2021
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4' LED LENSED LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-4-L52-835-(L44)-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4352
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	30.4
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	7615	6979	7161
55	6493	6048	6368
65	5223	5010	5513
75	4051	4248	4764
85	1901	3829	4435

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1405.347	1405.347	1405.347	1405.347	1405.347
5	1417.130	1398.550	1394.924	1394.924	1390.845
10	1391.299	1375.437	1376.343	1379.969	1375.437
15	1344.620	1332.384	1342.354	1353.230	1351.871
20	1284.345	1279.360	1295.675	1315.615	1316.522
25	1200.958	1206.396	1235.854	1262.139	1268.937
30	1113.039	1122.556	1164.703	1198.692	1211.835
35	1003.366	1025.573	1081.315	1125.728	1141.137
40	898.679	922.698	989.771	1051.858	1066.360
45	774.505	809.400	890.975	958.047	976.175
50	658.488	701.541	790.820	864.690	884.630
55	543.830	585.977	688.398	764.988	788.554
60	435.064	482.649	587.790	658.488	685.226
65	330.377	380.681	483.556	573.741	593.228
70	243.817	288.230	396.090	483.556	506.668
75	165.415	214.813	324.032	402.434	419.656
80	91.998	152.272	259.226	330.377	354.849
85	32.630	102.875	205.749	271.915	292.309
90	0.000	67.979	160.430	225.236	238.379
95	0.000	43.506	126.440	184.449	204.389
100	0.000	29.004	96.983	152.726	168.587
105	0.000	19.487	76.589	123.268	140.943
110	0.000	9.064	60.728	101.062	117.830
115	0.000	5.891	48.492	85.200	96.983
120	0.000	0.000	38.521	69.792	82.028
125	0.000	0.000	29.911	55.743	65.260
130	0.000	0.000	23.566	43.960	52.117
135	0.000	0.000	19.034	33.989	41.694
140	0.000	0.000	9.970	25.832	31.723
145	0.000	0.000	3.626	19.940	23.113
150	0.000	0.000	0.000	17.221	19.487
155	0.000	0.000	0.000	16.315	17.221
160	0.000	0.000	0.000	9.517	15.862
165	0.000	0.000	0.000	3.172	5.438
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	512.09	N.A.	11.80
0-30	1081.05	N.A.	24.80
0-40	1754.84	N.A.	40.30
0-60	3043.43	N.A.	69.90
0-80	3844.52	N.A.	88.30
0-90	4050.64	N.A.	93.10
10-90	3917.79	N.A.	90.00
20-40	1242.75	N.A.	28.60
20-50	1925.58	N.A.	44.20
40-70	1761.11	N.A.	40.50
60-80	801.09	N.A.	18.40
70-80	328.57	N.A.	7.60
80-90	206.12	N.A.	4.70
90-110	203.76	N.A.	4.70
90-120	250.72	N.A.	5.80
90-130	277.70	N.A.	6.40
90-150	297.88	N.A.	6.80
90-180	301.20	N.A.	6.90
110-180	97.43	N.A.	2.20
0-180	4351.83	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	132.85
10-20	379.24
20-30	568.96
30-40	673.79
40-50	682.83
50-60	605.76
60-70	472.52
70-80	328.57
80-90	206.12
90-100	126.14
100-110	77.62
110-120	46.96
120-130	26.98
130-140	14.27
140-150	5.91
150-160	2.75
160-170	0.57
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	16.0	17.5	16.4	17.9	18.4	19.0	20.5	19.5	20.9	21.4
	3H	17.2	18.5	17.7	19.0	19.5	21.2	22.6	21.7	23.1	23.6
	4H	17.6	18.9	18.1	19.3	19.9	22.3	23.6	22.8	24.1	24.6
	6H	17.8	19.0	18.3	19.5	20.0	23.4	24.6	23.9	25.1	25.6
	8H	17.8	19.0	18.4	19.5	20.1	24.0	25.1	24.5	25.6	26.2
	12H	17.8	18.9	18.4	19.5	20.1	24.6	25.7	25.1	26.2	26.8
4H	2H	16.9	18.2	17.4	18.7	19.2	19.3	20.6	19.8	21.1	21.6
	3H	18.4	19.5	18.9	20.0	20.6	21.8	22.9	22.3	23.4	24.0
	4H	18.9	19.9	19.4	20.4	21.0	23.0	24.0	23.5	24.6	25.2
	6H	19.2	20.1	19.7	20.6	21.3	24.3	25.2	24.9	25.8	26.4
	8H	19.3	20.1	19.8	20.7	21.3	25.0	25.8	25.5	26.4	27.0
	12H	19.3	20.1	19.9	20.7	21.3	25.7	26.5	26.3	27.1	27.7
8H	4H	19.6	20.4	20.2	21.0	21.6	23.2	24.0	23.7	24.6	25.2
	6H	20.1	20.8	20.7	21.4	22.1	24.6	25.3	25.2	25.9	26.6
	8H	20.3	20.9	20.9	21.5	22.2	25.4	26.1	26.0	26.7	27.3
	12H	20.4	21.0	21.0	21.6	22.3	26.4	26.9	27.0	27.5	28.2
12H	4H	19.8	20.6	20.4	21.2	21.8	23.2	23.9	23.8	24.5	25.2
	6H	20.4	21.1	21.1	21.7	22.3	24.7	25.3	25.3	25.9	26.6
	8H	20.7	21.3	21.3	21.9	22.6	25.5	26.1	26.1	26.7	27.4

Maximum UGR = 28.2

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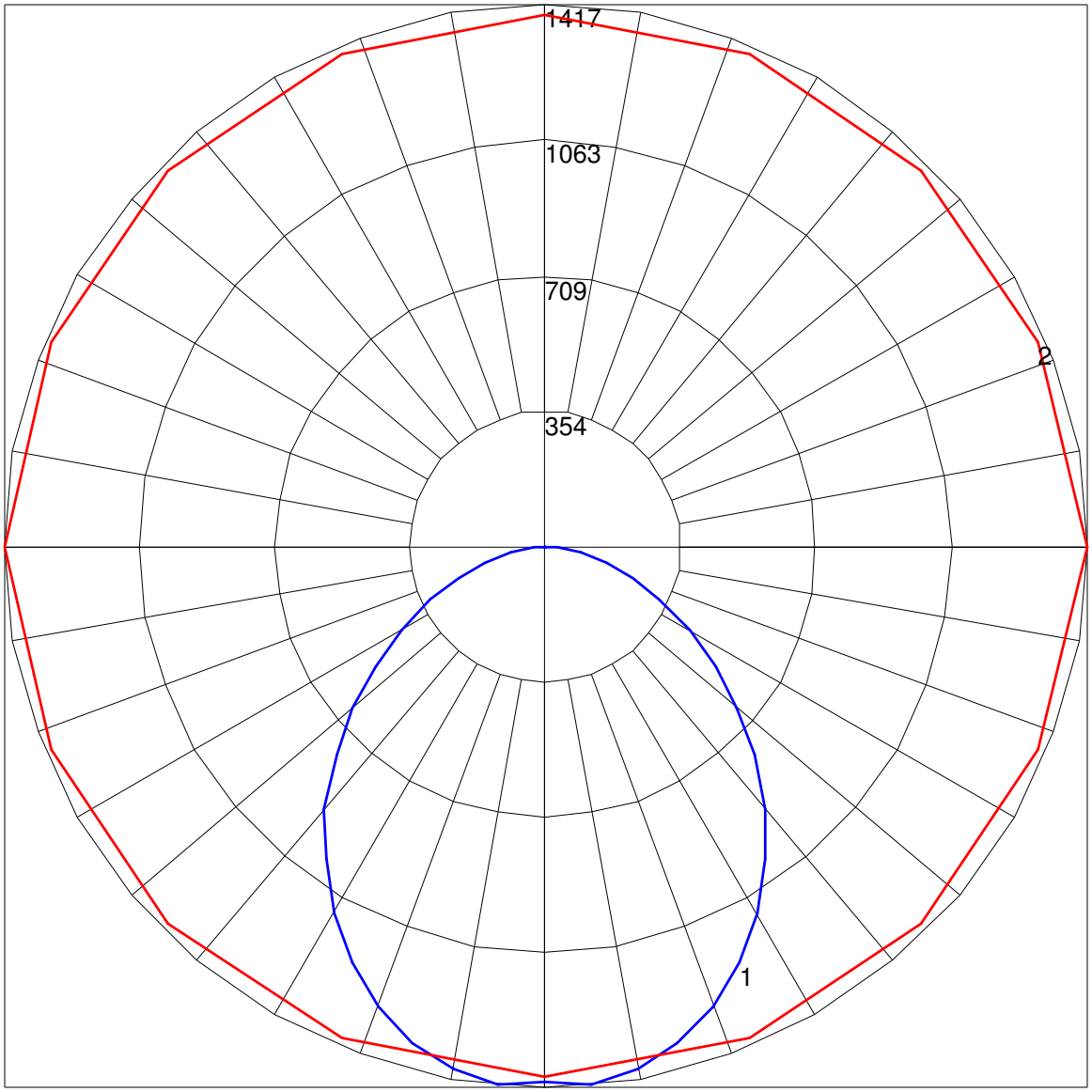
POLAR GRAPH



Maximum Candela = 1417.13 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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