IES INDOOR REPORT
PHOTOMETRIC FILENAME : HETWG-4-L30-835-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 16990.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 05-20-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 4' RECESSED ASYMMETRIC LUMINAIRE
[MORE] WITH FROSTED ACRYLIC RIBBED ASYMMETRIC DIFFUSER
[LUMCAT] HETWG-4-L30-835-A-DIM-UNV
[LAMPCAT] HLM 80 CRI, 3500K CCT
[_SEARCH_SOURCETYPE]LED
[_SEARCH_APPLICATION]Indoor, Office, Linear, Direct, Wall Wash
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3013
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	34
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.44
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.35 ft
Luminous Width (90-270)	3.84 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10721	11919	8607
55	6904	9160	7038
65	4375	6471	5815
75	3036	4108	4435
85	1945	2740	3182

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	1424.327	1424.327	1424.327	1424.327	1424.327	1424.327	1424.327	1424.327	1424.327
5	1495.447	1483.914	1458.926	1425.288	1390.689	1367.623	1332.063	1306.114	1295.542
10	1560.801	1543.502	1503.136	1441.627	1366.662	1303.231	1237.877	1192.706	1173.484
15	1536.774	1517.552	1469.498	1394.534	1294.581	1199.433	1105.247	1043.738	1017.788
20	1646.338	1618.466	1553.113	1441.627	1299.386	1150.418	1017.788	925.524	894.770
25	1537.735	1517.552	1453.160	1338.791	1184.056	1023.555	881.314	789.050	759.257
30	1486.798	1466.615	1401.261	1274.398	1092.753	908.225	757.335	664.109	632.394
35	1354.168	1358.012	1318.608	1187.900	999.528	806.350	659.304	571.845	543.013
40	1143.691	1169.640	1185.978	1058.154	866.898	675.642	538.207	458.437	434.410
45	945.707	988.956	1051.426	955.318	759.257	571.845	449.788	378.667	359.446
50	703.514	755.412	846.715	801.544	628.549	467.087	366.173	310.430	293.131
55	493.997	549.740	655.460	652.576	503.608	368.095	285.442	240.271	222.011
60	341.185	377.706	483.425	511.297	396.928	290.248	223.933	182.606	173.956
65	230.660	261.415	341.185	390.200	306.586	221.049	164.345	139.357	133.591
70	151.851	167.229	220.088	268.143	217.205	153.774	111.486	98.992	96.108
75	98.031	105.719	132.630	169.151	143.202	95.147	72.081	65.354	64.393
80	56.704	60.548	74.004	94.186	84.575	49.976	41.327	37.482	37.482
85	21.144	23.066	29.794	36.521	34.599	19.222	17.300	14.416	14.416
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	502.22	N.A.	16.70
0-30	1043.46	N.A.	34.60
0-40	1651.03	N.A.	54.80
0-60	2614.59	N.A.	86.80
0-80	2982.88	N.A.	99.00
0-90	3012.64	N.A.	100.00
10-90	2880.04	N.A.	95.60
20-40	1148.81	N.A.	38.10
20-50	1704.03	N.A.	56.60
40-70	1213.87	N.A.	40.30
60-80	368.29	N.A.	12.20
70-80	117.99	N.A.	3.90
80-90	29.76	N.A.	1.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3012.64	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	132.60
10-20	369.62
20-30	541.24
30-40	607.57
40-50	555.22
50-60	408.34
60-70	250.31
70-80	117.99
80-90	29.76
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56
5	80	68	59	53	78	67	59	53	65	58	53	63	57	52	61	56	51	49
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	52	46	41	51	46	41	39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	42	37	35
9	60	48	40	34	59	47	39	34	46	39	34	45	39	34	44	38	34	32
10	57	44	36	31	55	43	36	31	43	36	31	42	35	31	41	35	31	29

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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	18.6	20.1	19.0	20.4	20.7	18.8	20.3	19.2	20.6	20.9
	3H	19.4	20.8	19.8	21.1	21.5	20.2	21.5	20.5	21.8	22.2
	4H	19.7	21.0	20.1	21.3	21.7	20.6	21.9	21.0	22.2	22.6
	6H	19.9	21.1	20.3	21.4	21.8	20.9	22.1	21.3	22.4	22.8
	8H	19.9	21.1	20.4	21.4	21.8	21.0	22.1	21.4	22.5	22.9
	12H	20.0	21.0	20.4	21.4	21.8	21.1	22.1	21.5	22.5	22.9
4H	2H	19.3	20.5	19.7	20.9	21.3	19.1	20.4	19.5	20.7	21.1
	3H	20.3	21.3	20.7	21.7	22.1	20.7	21.7	21.1	22.1	22.5
	4H	20.6	21.6	21.1	22.0	22.4	21.2	22.2	21.7	22.6	23.0
	6H	20.9	21.7	21.3	22.1	22.6	21.7	22.5	22.1	22.9	23.4
	8H	20.9	21.7	21.4	22.2	22.6	21.8	22.6	22.3	23.0	23.5
	12H	21.0	21.7	21.5	22.1	22.6	21.9	22.6	22.4	23.1	23.5
8H	4H	20.9	21.6	21.3	22.1	22.5	21.3	22.1	21.8	22.5	23.0
	6H	21.2	21.8	21.7	22.3	22.8	21.8	22.5	22.3	22.9	23.4
	8H	21.3	21.9	21.9	22.4	22.9	22.0	22.6	22.6	23.1	23.6
	12H	21.4	21.9	21.9	22.4	23.0	22.2	22.7	22.7	23.2	23.7
12H	4H	20.9	21.6	21.4	22.1	22.5	21.3	22.0	21.8	22.5	22.9
	6H	21.3	21.8	21.8	22.3	22.8	21.8	22.4	22.3	22.9	23.4
	8H	21.4	21.9	21.9	22.4	23.0	22.1	22.6	22.6	23.0	23.6

Maximum UGR = 23.7

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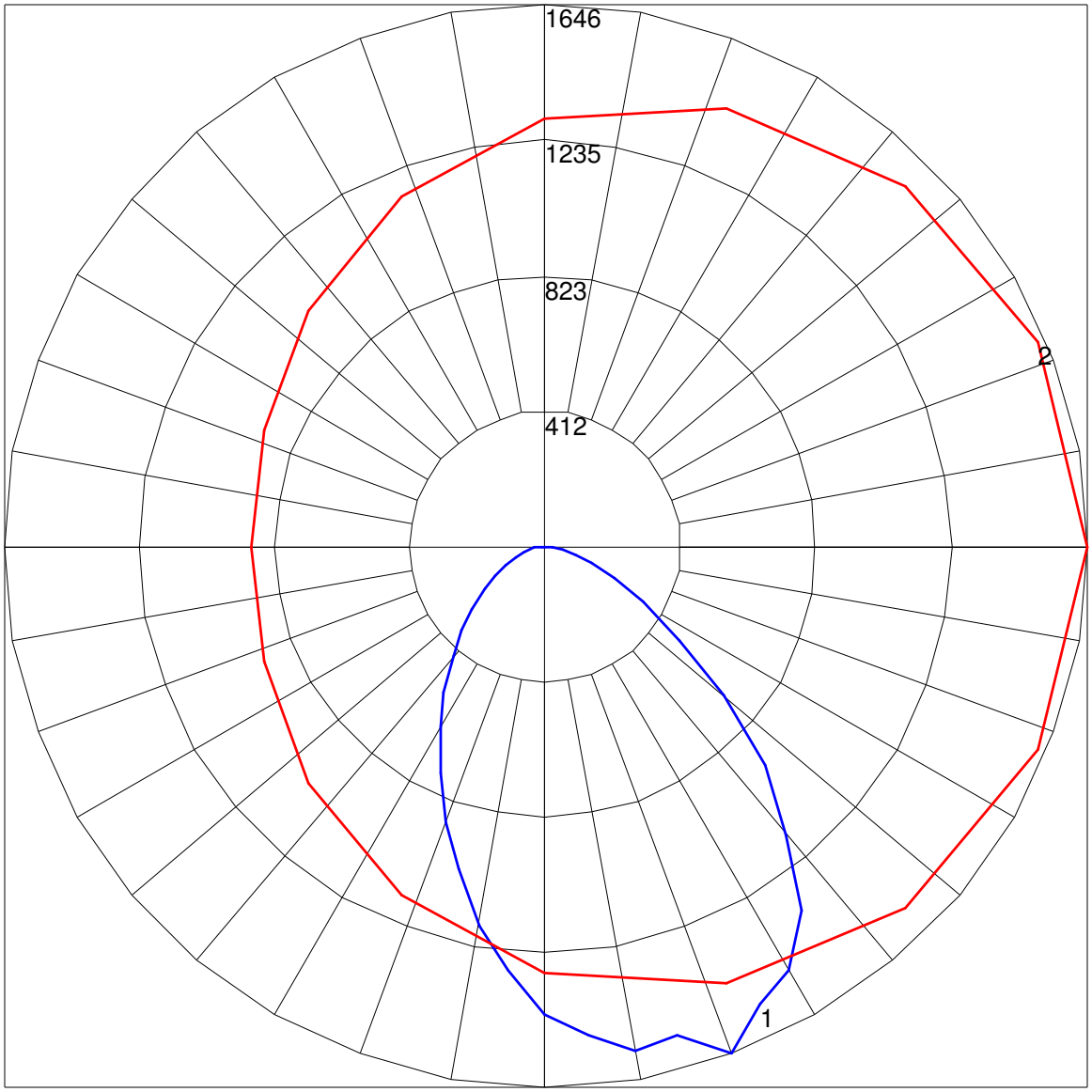
POLAR GRAPH



Maximum Candela = 1646.338 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)

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