IES INDOOR REPORT
PHOTOMETRIC FILENAME : HETWG-2-L16-835-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] 2' LED RECESSED ASYMMETRIC LUMINAIRE
[MORE] WITH FROSTED ACRYLIC RIBBED ASYMMETRIC DIFFUSER
[LUMCAT] HETWG-2-L16-835-A-DIM-UNV
[LAMPCAT]HLM 80 CRI, 3500K CCT
[_SEARCH_SOURCETYPE]LED
[_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,WALL WASH
[_SEARCH_MOUNTING]RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1600
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	22
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)	1.90 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	11518	12806	9247
55	7417	9841	7561
65	4700	6953	6248
75	3262	4413	4765
85	2089	2944	3419

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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	756.364	756.364	756.364	756.364	756.364	756.364	756.364	756.364	756.364
5	794.131	788.006	774.737	756.874	738.501	726.252	707.368	693.588	687.974
10	828.836	819.649	798.214	765.550	725.742	692.057	657.352	633.365	623.158
15	816.077	805.869	780.351	740.542	687.464	636.938	586.922	554.258	540.478
20	874.258	859.458	824.753	765.550	690.016	610.909	540.478	491.483	475.151
25	816.587	805.869	771.675	710.941	628.772	543.541	468.006	419.011	403.190
30	789.537	778.820	744.115	676.746	580.287	482.297	402.169	352.663	335.821
35	719.107	721.148	700.223	630.813	530.781	428.198	350.112	303.668	288.357
40	607.336	621.116	629.793	561.914	460.351	358.788	285.805	243.445	230.686
45	502.201	525.167	558.341	507.305	403.190	303.668	238.852	201.085	190.877
50	373.588	401.148	449.633	425.646	333.780	248.038	194.450	164.848	155.662
55	262.329	291.930	348.070	346.539	267.432	195.470	151.579	127.592	117.895
60	181.180	200.574	256.714	271.515	210.781	154.131	118.915	96.970	92.376
65	122.488	138.820	181.180	207.209	162.807	117.384	87.273	74.003	70.941
70	80.638	88.804	116.874	142.392	115.343	81.659	59.203	52.568	51.037
75	52.057	56.140	70.431	89.825	76.045	50.526	38.278	34.705	34.195
80	30.112	32.153	39.298	50.016	44.912	26.539	21.946	19.904	19.904
85	11.228	12.249	15.821	19.394	18.373	10.207	9.187	7.656	7.656
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	266.70	N.A.	16.70
0-30	554.11	N.A.	34.60
0-40	876.75	N.A.	54.80
0-60	1388.43	N.A.	86.80
0-80	1584.01	N.A.	99.00
0-90	1599.81	N.A.	100.00
10-90	1529.39	N.A.	95.60
20-40	610.05	N.A.	38.10
20-50	904.89	N.A.	56.60
40-70	644.60	N.A.	40.30
60-80	195.58	N.A.	12.20
70-80	62.65	N.A.	3.90
80-90	15.80	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	1599.81	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	70.41
10-20	196.28
20-30	287.42
30-40	322.64
40-50	294.84
50-60	216.84
60-70	132.92
70-80	62.65
80-90	15.80
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	18.9	20.4	19.2	20.7	21.0	19.1	20.6	19.4	20.9	21.2
	3H	19.7	21.0	20.1	21.4	21.7	20.4	21.7	20.8	22.1	22.4
	4H	20.0	21.2	20.4	21.6	22.0	20.8	22.1	21.2	22.5	22.8
	6H	20.2	21.3	20.6	21.7	22.1	21.2	22.3	21.6	22.7	23.1
	8H	20.2	21.3	20.6	21.7	22.1	21.3	22.4	21.7	22.8	23.2
	12H	20.2	21.3	20.7	21.7	22.1	21.3	22.4	21.8	22.8	23.2
4H	2H	19.5	20.8	19.9	21.1	21.5	19.4	20.6	19.8	21.0	21.4
	3H	20.5	21.6	20.9	22.0	22.4	20.9	22.0	21.3	22.4	22.8
	4H	20.9	21.8	21.3	22.2	22.7	21.5	22.4	21.9	22.8	23.3
	6H	21.1	21.9	21.6	22.4	22.8	21.9	22.7	22.4	23.2	23.6
	8H	21.2	22.0	21.6	22.4	22.9	22.0	22.8	22.5	23.3	23.7
	12H	21.2	21.9	21.7	22.4	22.9	22.1	22.8	22.6	23.3	23.8
8H	4H	21.1	21.9	21.6	22.3	22.8	21.6	22.3	22.0	22.8	23.2
	6H	21.4	22.1	21.9	22.6	23.1	22.1	22.7	22.6	23.2	23.7
	8H	21.6	22.1	22.1	22.6	23.1	22.3	22.8	22.8	23.3	23.8
	12H	21.7	22.2	22.2	22.6	23.2	22.4	22.9	22.9	23.4	24.0
12H	4H	21.1	21.8	21.6	22.3	22.8	21.6	22.2	22.0	22.7	23.2
	6H	21.5	22.1	22.0	22.5	23.1	22.1	22.6	22.6	23.1	23.6
	8H	21.7	22.2	22.2	22.7	23.2	22.3	22.8	22.8	23.3	23.9

Maximum UGR = 24.0

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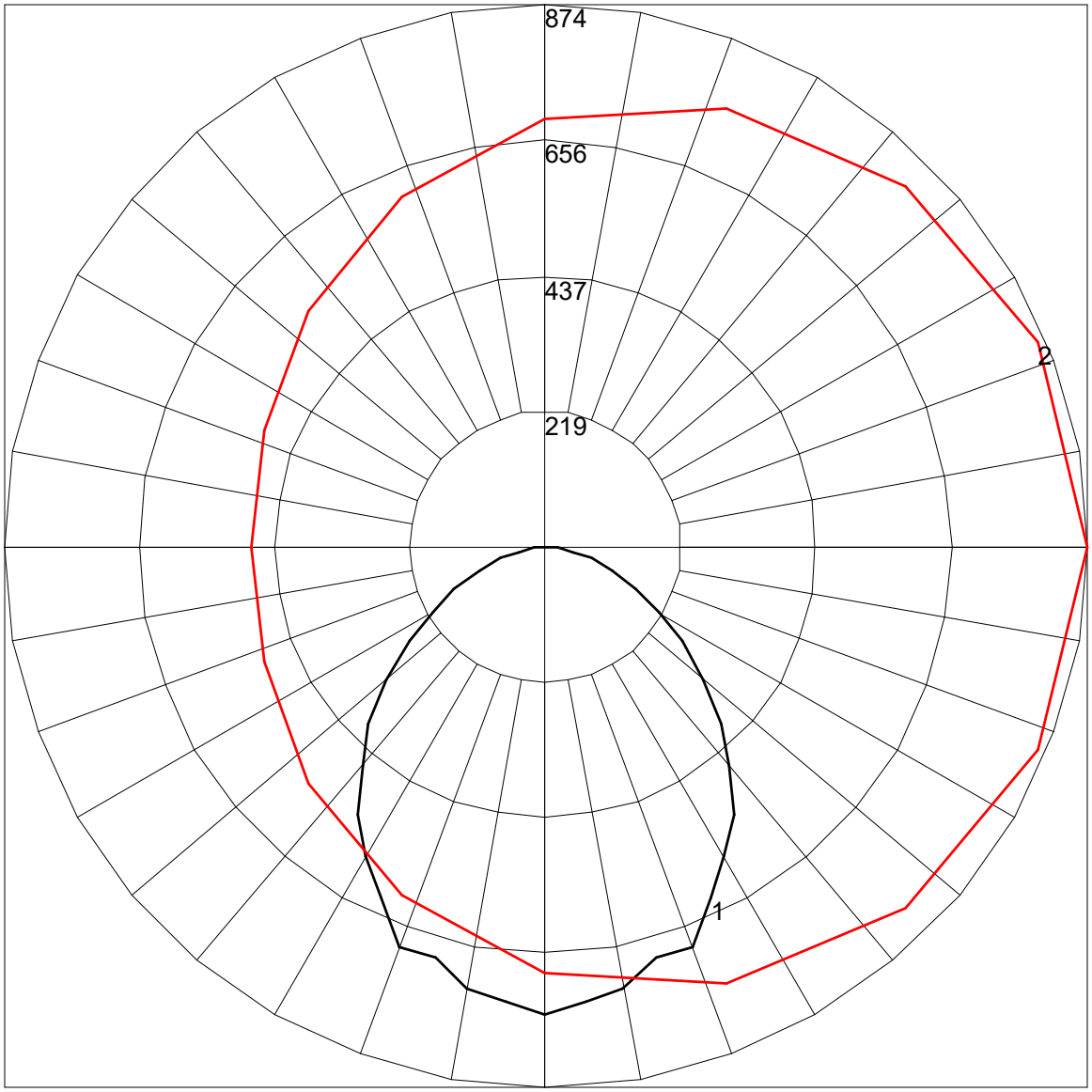
POLAR GRAPH



Maximum Candela = 874.258 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)

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