

**IES Report**

**DoubleBox™ | 107 | 120° Batwing, up | 85° Asymmetric, down | 90 CRI | SO**

107-DB-XX-4-48-XX-XX-XX-XX-X-X-Z-SO-359-G1A1-X-AL / WH-X

	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	81	84	85	87
Total Lumens, 4' rail length (1219mm)	3880	4002	4084	4166
Lumens per foot (305mm)	970	1001	1021	1041
Lumens per foot UP (305mm)	637	657	670	684
Lumens per foot DOWN (305mm)	333	344	351	358
Input Power (W), 4' rail length (1219mm)	48.15	48.15	48.15	48.15
Watts per foot (305mm)	12.1	12.1	12.1	12.1
CRI	96	96	96	96

Due to the large number of options in Vode's product offering, most Vode IES reports are factored reports prepared from source reports. Source reports are the IES test reports prepared for Vode by an NVLAP accredited photometric test laboratory. Factored reports are based on data from the Vode source reports.

If the data above is in black, it is directly from a Vode source report. If it is in grey, it is factored from Vode source reports. Reference details on Vode source reports can be found on the [IES File Finder](#) page on [vode.com](#).



8165 E Kaiser Blvd. Anaheim, CA 92808  
www.lightlaboratory.com

Report No: L011800105



**Report No:** L011800105

**Issue Date:** 1/12/2018

**Report Prepared For:** Vode Lighting  
21684 8th Street East, Suite 700, Sonoma, CA 95476

**Model Number:** 107-DB-48-Z-SO-359-G1A1

**Test:** Photometric/Colorimetric/Electrical Test

**Standards Used:** Appropriate part or all test guidelines were used for test performed:  
*IESNA LM79: 2008* Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products  
*ANSI NEMA ANSLG C78.377: 2008* Specification of the Chromaticity of Solid State Lighting Products  
*ANSI C82.77:2002:* Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

**Description of Sample:** Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 1/5/18

**Date of Tests:** 1/11/18 - 1/12/18

**Seasoning of Sample:** No seasoning was performed in accordance with IESNA LM-79.

**Equipment List**

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	1/9/19
BK PRECISION	1747	PS-DC04	1/10/19
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/19
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

**Test Summary**

<b>Manufacturer:</b>	Vode Lighting
<b>Model Number:</b>	107-DB-48-Z-SO-359-G1A1
<b>Driver Model Number:</b>	MEAN WELL HLG-40H-36A (2 DRIVERS)
<b>Total Lumens:</b>	4084.13
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.4
<b>Input Power (W):</b>	48.15
<b>Input Power Factor:</b>	0.99
<b>Current ATHD @ 120V(%):</b>	10%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	85
<b>Color Rendering Index (CRI):</b>	96
<b>Correlated Color Temperature (K):</b>	3314
<b>Chromaticity Coordinate x:</b>	0.4151
<b>Chromaticity Coordinate y:</b>	0.3933
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:30
<b>Total Operating Time (Hours):</b>	2:20

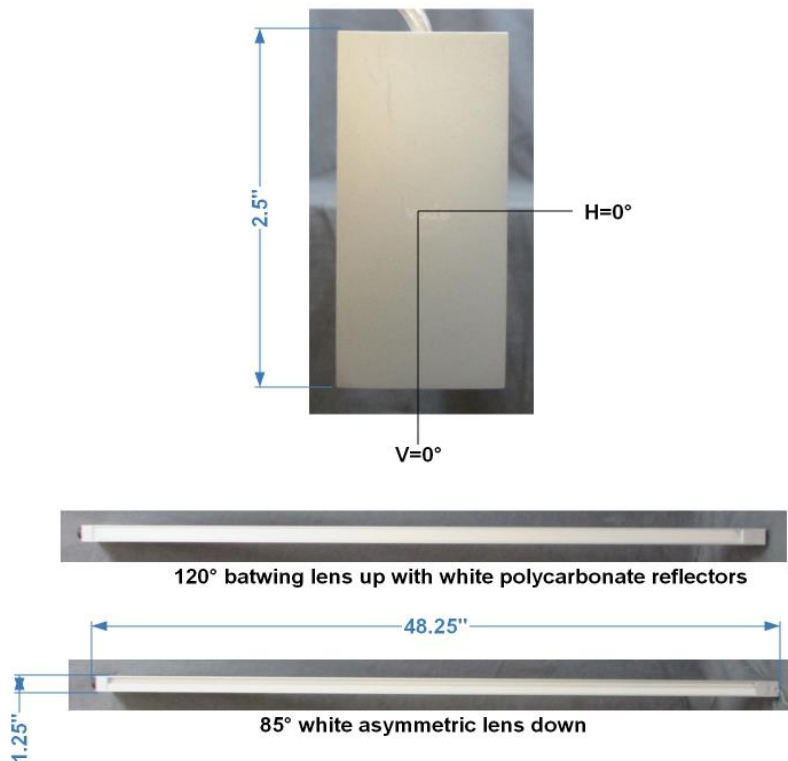
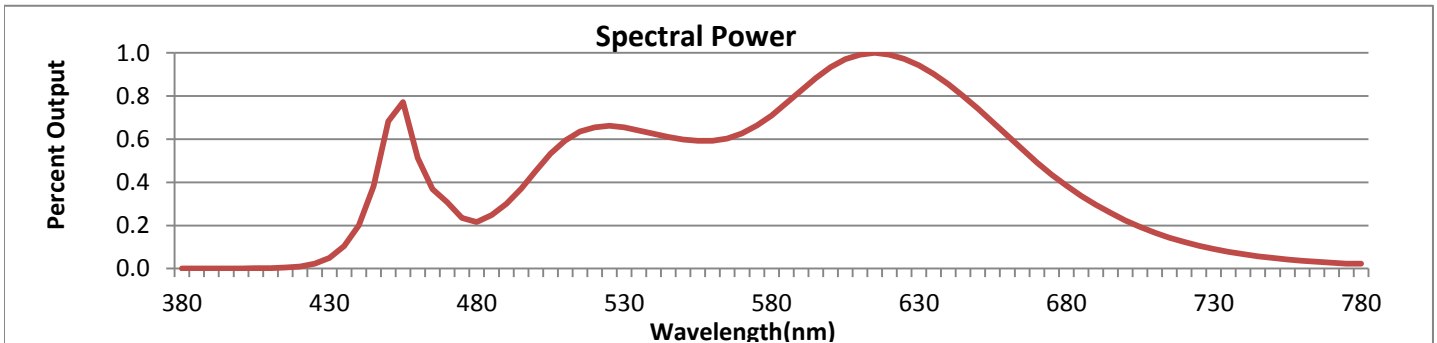


FIG. 1 LUMINAIRE

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.



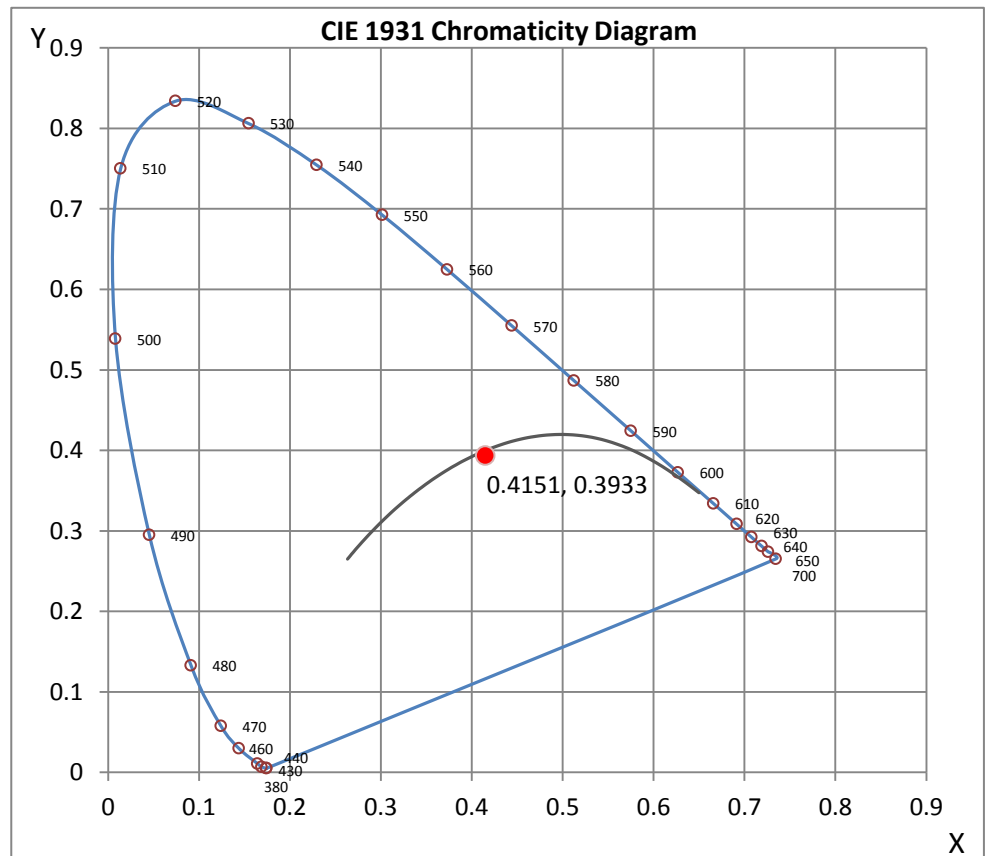
Wavelength	W/m <sup>2</sup> nm	440	0.2006	510	0.5939	580	0.7103	650	0.7423	720	0.1233
380	0.0009	450	0.6836	520	0.6556	590	0.8262	660	0.6175	730	0.0906
390	0.0009	460	0.5120	530	0.6543	600	0.9335	670	0.4922	740	0.0668
400	0.0012	470	0.3080	540	0.6253	610	0.9916	680	0.3853	750	0.0493
410	0.0022	480	0.2153	550	0.5981	620	0.9917	690	0.2952	760	0.0364
420	0.0095	490	0.3005	560	0.5919	630	0.9422	700	0.2229	770	0.0269
430	0.0495	500	0.4537	570	0.6269	640	0.8545	710	0.1666	780	0.0233

**CRI & CCT**

x	0.4151
y	0.3933
u'	0.2410
v'	0.5138
CRI	95.60
CCT	3314
Duv	-0.00090

**R Values**

R1	97.26
R2	98.66
R3	99.00
R4	95.25
R5	97.28
R6	94.03
R7	94.40
R8	89.01
R9	73.94
R10	97.73
R11	88.06
R12	83.28
R13	96.85
R14	98.49



\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

## Test Methods

### Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Keyur Patel

Test Report Released by:



Jeff Ahn  
Engineering Manager

Test Report Reviewed by:



Steve Kang  
Quality Assurance

*\*Attached are photometric data reports. Total number of pages: 11*



8165 E. Kaiser Blvd. Anaheim, CA 92808  
 www.lightlaboratory.com

# Photometric Test Report

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L011800105.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L011800105  
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
 [ISSUEDATE] 1/12/2018  
 [MANUFAC] Vode Lighting  
 [LUMCAT] 107-DB-48-Z-SO-359-G1A1  
 [LUMINAIRE] DoubleBox LED, 48", 3500K, 90 CRI, zipper board,  
 [MORE] 120° batwing lens up with white polycarbonate reflectors/85° white asymmetric lens down, standard output  
 [BALLASTCAT] MEAN WELL HLG-40H-36A (2 DRIVERS)  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 120VAC, 48.15W  
 [TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4084
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	48.15
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.08 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.21 ft

## LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	11440	11949	11070
55	7365	7561	8865
65	3785	3934	7096
75	1083	1529	5209
85	20	92	2325

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
<b>0</b>	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45
<b>5</b>	591.06	590.24	588.24	585.07	580.75	575.32	568.82	561.31	552.84	543.47
<b>10</b>	757.79	755.97	751.61	744.74	735.42	723.75	709.80	692.76	673.84	653.16
<b>15</b>	902.28	899.59	893.57	884.27	871.41	853.93	833.73	811.00	785.95	757.34
<b>20</b>	1002.09	998.85	992.50	982.34	966.59	948.45	927.53	902.40	875.91	838.78
<b>25</b>	1047.26	1043.76	1038.52	1027.28	1013.95	997.00	977.58	958.04	921.38	881.58
<b>30</b>	1042.94	1039.70	1034.91	1025.33	1013.63	999.59	983.23	957.22	925.54	891.20
<b>35</b>	998.93	995.65	990.32	983.54	971.88	959.45	944.46	916.23	889.79	854.38
<b>40</b>	923.04	919.99	913.95	905.96	896.57	885.02	865.27	843.65	817.60	782.18
<b>45</b>	822.40	819.58	813.83	805.59	796.50	783.06	763.11	745.43	714.61	686.15
<b>50</b>	699.00	695.12	690.36	684.30	676.09	662.64	644.74	623.56	597.66	566.61
<b>55</b>	562.66	558.80	556.02	552.56	543.34	527.57	514.01	493.40	476.10	450.89
<b>60</b>	424.65	422.33	419.39	405.43	391.37	381.37	370.53	360.62	349.70	329.74
<b>65</b>	297.44	296.05	281.75	268.10	262.48	259.75	255.64	248.99	242.55	236.17
<b>70</b>	182.52	175.42	162.90	162.46	164.54	164.76	163.30	158.21	155.61	152.74
<b>75</b>	84.86	74.88	78.39	79.69	80.92	83.76	83.82	84.82	88.33	89.61
<b>80</b>	16.44	19.00	17.98	19.13	20.46	21.93	23.10	26.84	29.88	35.50
<b>85</b>	1.50	2.66	2.27	2.12	2.00	2.29	1.97	2.56	3.96	5.09
<b>90</b>	0.98	1.00	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
<b>95</b>	37.20	38.49	34.94	33.61	33.27	34.09	34.90	36.40	38.36	38.59
<b>100</b>	141.83	117.26	119.09	116.80	115.84	113.85	111.53	114.15	109.52	108.02
<b>105</b>	241.80	207.52	213.25	208.81	209.80	207.65	204.95	202.96	202.14	196.09
<b>110</b>	356.06	343.61	316.32	311.86	314.47	314.33	312.04	306.35	300.09	286.74
<b>115</b>	468.16	467.82	446.01	427.35	419.15	417.53	413.70	407.05	398.30	384.65
<b>120</b>	577.77	576.50	572.98	559.11	542.18	532.75	524.55	517.23	501.62	479.25
<b>125</b>	679.57	677.68	674.81	670.97	664.96	650.57	641.92	618.03	596.33	564.89
<b>130</b>	768.42	766.07	761.57	755.35	748.22	736.51	719.82	696.67	665.50	626.17
<b>135</b>	838.01	835.77	830.38	822.36	811.89	798.94	776.43	753.43	716.32	678.67
<b>140</b>	885.84	883.07	876.21	866.46	854.35	839.17	815.03	786.19	752.51	709.52
<b>145</b>	911.24	907.83	900.40	889.60	874.32	856.35	834.62	801.02	766.23	727.00
<b>150</b>	908.09	904.19	897.26	884.68	868.62	848.91	826.09	797.30	764.56	729.20
<b>155</b>	874.54	871.09	865.49	853.55	838.92	820.71	799.58	777.15	749.34	720.97
<b>160</b>	820.90	817.97	813.01	805.22	792.67	778.60	762.69	743.73	723.96	705.37
<b>165</b>	755.97	753.92	750.58	745.99	739.76	730.60	720.53	709.65	698.06	684.77
<b>170</b>	700.17	699.00	697.32	695.15	692.50	689.42	685.90	680.77	675.39	669.76
<b>175</b>	665.95	665.54	665.07	664.56	664.01	663.43	662.82	662.18	661.52	660.85
<b>180</b>	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00

Vert. Angles Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
<b>0</b>	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45
<b>5</b>	533.29	522.36	510.77	498.61	485.97	472.94	459.63	446.13	432.54	421.88
<b>10</b>	630.89	607.19	582.29	557.86	532.61	506.73	480.39	453.76	427.06	406.13
<b>15</b>	724.74	688.12	650.15	611.08	568.63	532.92	494.50	455.85	417.34	386.77
<b>20</b>	796.29	751.53	705.79	653.85	601.40	546.25	499.14	449.83	401.07	362.70
<b>25</b>	841.79	791.66	734.86	679.04	616.79	554.17	493.64	435.65	378.81	334.49
<b>30</b>	847.01	796.49	741.27	675.78	612.46	542.46	474.69	411.30	350.00	302.31
<b>35</b>	813.15	769.52	709.44	647.47	578.84	509.65	439.78	375.61	314.63	266.77
<b>40</b>	744.16	698.98	647.07	588.15	523.37	459.49	388.04	326.55	273.27	229.00
<b>45</b>	646.33	607.10	560.68	506.96	450.39	382.99	329.40	281.55	231.76	193.18
<b>50</b>	536.78	503.14	460.30	413.88	372.27	321.75	276.56	232.71	190.82	159.49
<b>55</b>	418.75	385.97	356.75	324.84	293.46	257.93	221.83	186.37	153.95	130.10
<b>60</b>	316.85	300.07	278.02	253.46	226.37	198.83	171.65	145.16	122.40	103.79

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L011800105.IES**

**CANDELA TABULATION - (Cont.)**

65	228.33	214.82	200.81	184.18	166.65	148.09	128.19	109.51	94.16	80.28
70	148.12	144.30	137.36	126.88	115.90	103.84	91.45	79.91	69.17	59.56
75	87.07	87.38	88.75	83.81	78.01	69.36	59.37	51.21	45.67	40.40
80	37.14	40.31	43.36	40.26	38.00	34.51	31.24	27.95	24.99	22.82
85	5.92	7.83	8.90	8.91	10.83	10.82	9.89	9.50	9.30	9.16
90	1.08	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.08
95	38.74	35.62	33.32	30.52	26.98	26.53	25.18	24.44	25.83	26.34
100	107.41	100.03	93.17	85.95	81.44	78.88	76.69	74.93	76.81	76.32
105	185.36	173.06	159.96	144.88	134.59	130.04	129.15	126.32	126.71	129.83
110	271.87	253.62	232.00	210.84	198.03	191.52	186.26	184.29	184.84	186.42
115	362.20	333.44	304.15	277.92	259.87	249.24	242.40	239.87	241.97	243.76
120	449.90	408.71	371.85	341.48	317.54	303.84	298.05	295.00	294.12	296.44
125	521.13	476.15	433.56	397.73	367.75	350.53	342.33	338.01	336.71	338.76
130	582.65	534.39	489.42	450.84	420.58	403.06	392.77	387.91	387.53	391.59
135	628.75	581.50	536.53	498.17	467.89	447.45	437.11	431.70	429.96	434.76
140	664.68	617.98	575.11	537.12	508.95	487.39	476.44	470.52	468.49	474.02
145	684.99	644.71	605.32	571.35	544.85	525.57	512.72	507.61	505.94	511.92
150	693.96	659.04	625.83	598.78	574.20	558.93	545.26	542.03	540.74	546.89
155	692.71	665.65	640.84	617.18	600.97	587.11	577.63	574.19	572.21	578.33
160	685.94	665.86	646.79	633.60	620.99	608.54	605.11	602.09	600.11	605.93
165	672.54	662.64	652.86	643.25	633.35	630.73	628.41	626.38	624.93	629.52
170	663.92	657.92	651.91	649.93	648.10	646.43	644.93	643.56	642.46	645.73
175	660.17	659.49	658.81	658.13	657.46	656.81	656.15	655.57	654.99	656.70
180	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00

**Vert. Angles Horizontal Angles**

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45	434.45
5	411.32	400.94	390.80	380.99	371.57	362.63	354.23	346.43	339.29	332.86
10	385.45	365.12	345.30	326.12	307.25	295.27	283.73	273.03	263.27	254.51
15	356.67	327.09	298.81	279.30	260.57	242.77	226.00	213.82	205.04	196.87
20	325.08	288.51	263.04	238.30	214.39	199.47	186.24	173.74	162.88	157.06
25	291.20	256.30	226.89	199.83	182.96	166.61	153.84	145.26	137.40	130.93
30	255.56	223.58	191.80	172.27	153.87	141.87	131.76	123.66	118.90	114.39
35	223.48	191.48	165.56	146.41	132.59	121.89	114.42	108.85	104.73	102.00
40	191.56	161.90	141.76	125.02	114.25	106.31	100.45	96.78	93.69	91.93
45	162.07	137.28	120.14	107.93	98.66	93.01	89.05	86.06	84.53	83.32
50	134.96	115.94	101.51	92.52	86.17	81.68	78.71	77.17	76.00	75.45
55	111.05	96.58	86.06	78.71	74.20	71.27	69.38	68.45	67.93	67.73
60	89.78	79.14	71.55	66.40	63.03	61.03	60.13	59.62	59.46	59.67
65	70.35	62.92	57.70	54.47	52.37	51.08	50.65	50.42	50.51	50.52
70	52.94	48.02	44.64	42.86	41.49	40.77	40.60	40.61	40.76	40.84
75	36.18	33.59	31.84	31.06	30.53	30.51	30.60	30.81	30.93	31.08
80	20.95	20.20	19.93	19.95	19.92	20.43	20.65	20.92	21.32	21.65
85	8.90	9.41	10.04	10.34	10.17	10.13	9.98	9.87	9.74	9.92
90	1.16	1.16	1.08	1.16	1.16	1.25	1.33	1.33	1.33	1.33
95	26.83	27.52	30.20	35.07	40.09	46.27	52.16	54.85	57.71	62.85
100	77.78	79.95	84.05	90.00	99.52	113.37	126.90	137.65	144.38	149.72
105	132.85	135.35	142.24	154.17	172.17	193.12	213.26	230.80	243.94	251.50
110	190.76	197.09	207.54	224.37	249.40	278.33	306.31	328.80	341.26	363.70
115	248.04	256.87	271.71	292.95	318.94	350.82	397.09	431.87	455.87	471.74
120	303.61	315.11	333.73	359.29	393.84	437.21	480.44	519.96	551.75	577.34
125	345.33	362.69	388.04	418.31	461.08	506.17	554.39	602.18	636.58	663.49
130	400.59	415.85	439.13	473.40	517.07	566.61	618.28	664.00	705.16	737.54
135	444.75	460.83	487.31	522.33	565.22	614.87	665.36	717.59	756.85	795.08



**IES INDOOR REPORT**  
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**CANDELA TABULATION - (Cont.)**

<b>140</b>	484.42	500.98	528.15	561.59	604.22	651.53	702.38	749.68	794.22	828.82
<b>145</b>	521.57	539.28	563.37	594.52	633.08	677.40	721.95	767.54	808.82	844.32
<b>150</b>	554.99	572.64	592.08	621.06	652.90	690.70	729.54	768.03	805.54	840.42
<b>155</b>	585.96	599.57	617.53	637.84	665.76	694.78	725.50	756.62	787.86	818.32
<b>160</b>	612.78	620.47	635.79	651.65	668.00	690.30	713.50	736.01	757.61	779.71
<b>165</b>	634.67	640.07	646.20	658.04	670.06	682.19	694.38	708.93	724.60	738.63
<b>170</b>	649.27	652.91	656.68	660.56	664.60	672.25	679.93	687.41	694.63	701.54
<b>175</b>	658.41	660.18	661.91	663.62	665.30	666.93	668.51	670.01	671.44	672.77
<b>180</b>	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00	659.00

**Vert. Horizontal Angles**

	<u><b>150</b></u>	<u><b>155</b></u>	<u><b>160</b></u>	<u><b>165</b></u>	<u><b>170</b></u>	<u><b>175</b></u>	<u><b>180</b></u>
<b>0</b>	434.45	434.45	434.45	434.45	434.45	434.45	434.45
<b>5</b>	327.20	322.36	318.36	315.24	311.16	311.27	311.39
<b>10</b>	246.84	239.93	234.20	229.71	226.50	223.93	224.03
<b>15</b>	189.68	183.54	178.53	174.29	171.17	168.66	168.73
<b>20</b>	151.98	147.37	143.52	140.57	138.22	136.26	136.35
<b>25</b>	127.38	124.36	121.75	119.60	118.12	117.12	116.92
<b>30</b>	111.18	109.15	107.43	106.07	105.14	104.54	104.46
<b>35</b>	99.59	98.15	97.09	96.45	95.94	95.69	95.66
<b>40</b>	90.52	89.50	88.77	88.44	88.39	88.43	88.52
<b>45</b>	82.51	81.89	81.55	81.35	81.68	81.83	81.87
<b>50</b>	75.03	74.78	74.46	74.30	74.56	74.90	75.07
<b>55</b>	67.62	67.41	67.28	67.05	67.16	67.28	67.43
<b>60</b>	59.38	59.40	59.51	59.22	59.14	59.15	59.29
<b>65</b>	50.53	50.58	50.71	50.79	50.56	50.41	50.65
<b>70</b>	41.11	41.24	41.43	41.66	41.35	41.23	41.35
<b>75</b>	31.44	31.70	31.90	31.95	31.79	31.71	31.89
<b>80</b>	22.00	22.26	22.27	22.15	22.22	21.56	22.09
<b>85</b>	9.92	9.59	9.35	9.00	8.48	7.74	6.81
<b>90</b>	1.33	1.33	1.33	1.33	1.41	1.41	1.42
<b>95</b>	59.71	56.74	55.12	52.27	48.25	45.62	32.22
<b>100</b>	152.20	152.89	151.93	149.33	147.18	143.42	139.00
<b>105</b>	258.28	259.95	258.13	256.61	254.93	251.02	247.78
<b>110</b>	363.44	369.92	373.04	372.52	371.71	367.83	365.69
<b>115</b>	483.63	490.63	492.00	493.28	491.42	490.18	488.75
<b>120</b>	590.79	599.77	606.41	607.82	608.08	608.62	607.50
<b>125</b>	686.28	697.09	707.69	711.63	714.52	716.75	716.77
<b>130</b>	761.50	778.59	790.57	797.73	803.34	807.56	808.11
<b>135</b>	818.81	841.81	855.01	865.42	872.83	877.96	878.69
<b>140</b>	858.52	883.59	899.14	911.47	921.03	927.36	930.01
<b>145</b>	878.88	901.44	919.91	935.43	946.06	953.37	956.92
<b>150</b>	870.96	894.79	915.20	931.54	944.26	951.32	955.42
<b>155</b>	842.53	865.47	885.28	901.04	913.82	919.84	923.53
<b>160</b>	800.79	818.67	834.43	848.40	856.96	863.52	865.57
<b>165</b>	751.79	763.96	775.03	782.40	787.75	792.37	793.83
<b>170</b>	708.15	712.67	716.59	719.89	722.53	724.85	725.74
<b>175</b>	674.00	675.11	676.11	676.98	678.01	678.37	678.74
<b>180</b>	659.00	659.00	659.00	659.00	659.00	659.00	659.00

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	179.33	N.A.	4.40
0-30	407.92	N.A.	10.00
0-40	692.48	N.A.	17.00
0-60	1194.38	N.A.	29.20
0-80	1392.22	N.A.	34.10
0-90	1403.55	N.A.	34.40
10-90	1360.66	N.A.	33.30
20-40	513.15	N.A.	12.60
20-50	793.41	N.A.	19.40
40-70	639.38	N.A.	15.70
60-80	197.84	N.A.	4.80
70-80	60.36	N.A.	1.50
80-90	11.33	N.A.	0.30
90-110	257.68	N.A.	6.30
90-120	627.24	N.A.	15.40
90-130	1110.44	N.A.	27.20
90-150	2078.14	N.A.	50.90
90-180	2680.59	N.A.	65.60
110-180	2422.91	N.A.	59.30
0-180	4084.13	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	42.89
10-20	136.44
20-30	228.59
30-40	284.56
40-50	280.26
50-60	221.64
60-70	137.48
70-80	60.36
80-90	11.33
90-100	51.89
100-110	205.79
110-120	369.57
120-130	483.19
130-140	511.40
140-150	456.31
150-160	339.86
160-170	198.71
170-180	63.87

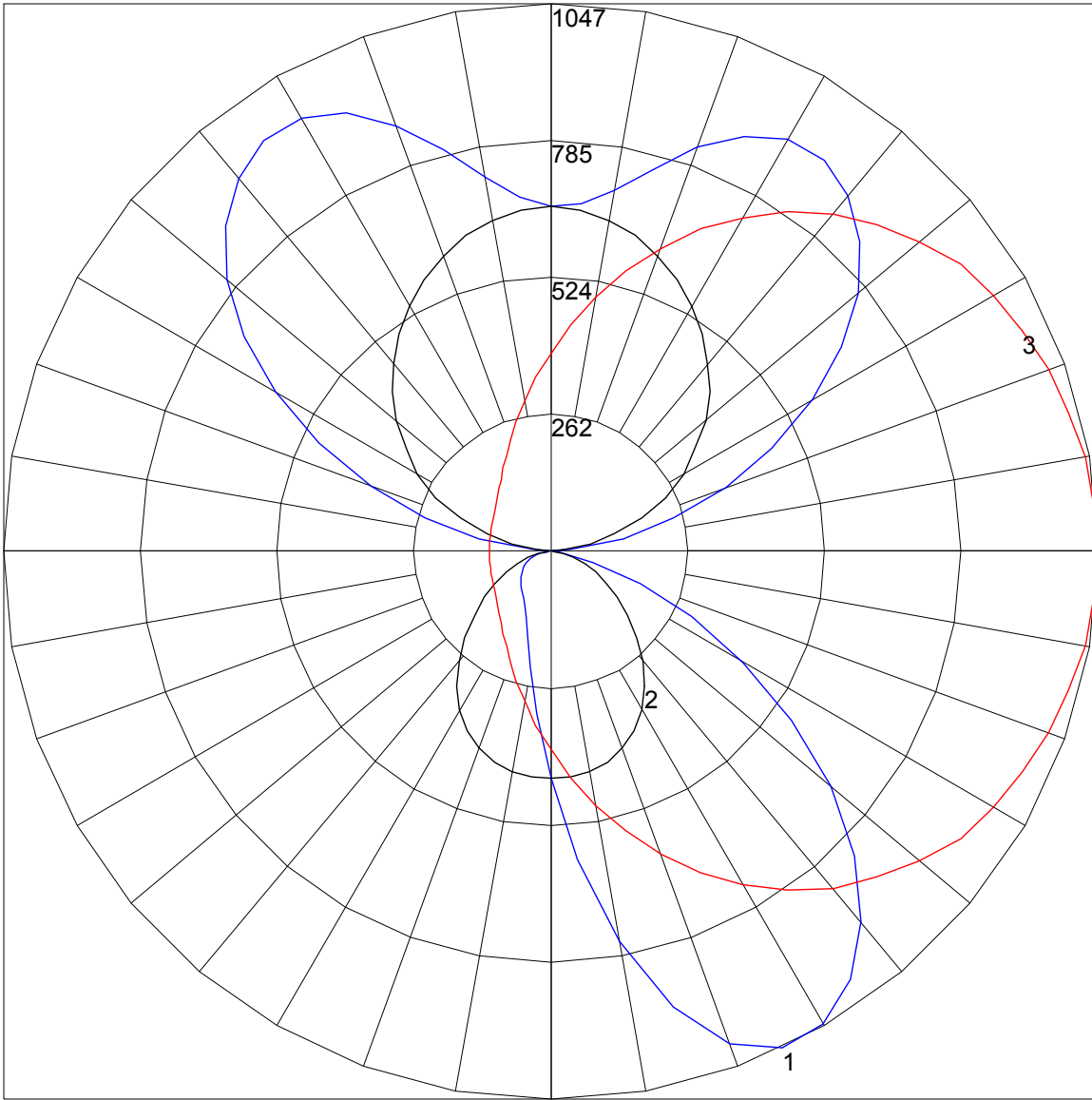
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L011800105.IES**

**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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34
1	95	90	87	83	85	82	79	76	66	64	62	51	50	48	37	37	36	30
2	86	79	73	68	78	72	67	63	58	54	51	45	43	41	33	32	30	25
3	79	70	63	57	71	63	57	52	51	47	43	40	37	34	29	28	26	21
4	72	62	54	48	65	56	49	44	45	41	37	35	32	30	26	24	22	18
5	66	55	47	41	59	50	43	38	40	35	32	32	28	26	24	21	19	16
6	61	49	41	36	55	45	38	33	36	31	27	29	25	22	21	19	17	14
7	56	44	36	31	50	40	33	29	33	28	24	26	22	20	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

POLAR GRAPH



Maximum Candela = 1047.26 Located At Horizontal Angle = 0, Vertical Angle = 25  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 3 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)