



LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING MEMBER of the IESNA

905 Harrison Street · Allentown, PA 18103 · 610-770-1044 · Fax 610-770-8912 · www.LuminaireTesting.com

LTL NUMBER: 12530

DATE: 06-17-2008

PREPARED FOR: RENOVA LIGHTING SYSTEMS, INC.

CATALOG NUMBER: ECS-ECO4-WN-432-UNV-14N-00W

LUMINAIRE: FORMED STEEL HOUSING, FORMED WHITE ENAMEL ALUMINUM REFLECTOR, NO ENCLOSURE.

LAMP: FOUR 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS EACH.

LAMP CATALOG NUMBER: PHILIPS F32T8/TL841/ALTO

BALLAST: ONE SYLVANIA QHE4X32T8/UNV ISN-SC

MOUNTING: PENDANT

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS =112.9 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

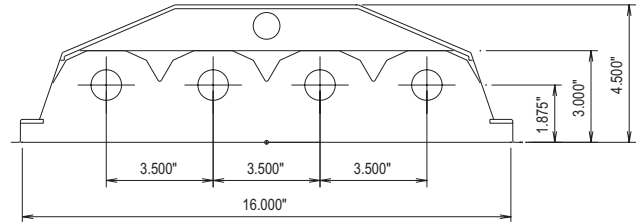
#12530

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	3061	3061	3061	3061	3061
5	3051	3045	3051	3048	3048
15	2952	2953	2967	2975	2981
25	2761	2773	2826	2878	2907
35	2481	2514	2637	2730	2771
45	2117	2183	2371	2454	2474
55	1677	1798	1965	2022	2027
65	1180	1332	1436	1508	1548
75	625	752	929	981	967
85	98	198	149	121	103
90	0	0	0	0	0

FLUX

290
839
1307
1645
1795
1710
1398
902
196



ZONAL LUMEN SUMMARY

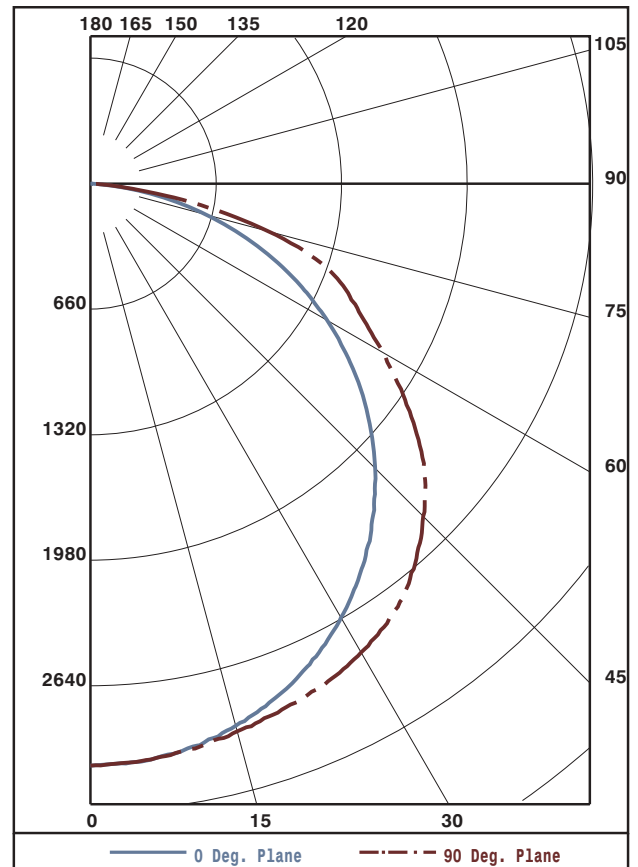
ZONE	LUMENS	%LAMP	%FIXT
0- 30	2436	21.4	24.2
0- 40	4082	35.8	40.5
0- 60	7587	66.6	75.3
0- 90	10082	88.4	100.0
90-180	0	0.0	0.0
0-180	10082	88.4	100.0

TOTAL LUMINAIRE EFFICIENCY: 88.4%

CIE TYPE: DIRECT
 PLANE: 0-DEG 90-DEG
 SPACING CRITERIA: 1.3 1.4
 LUMINOUS LENGTH: 47.000 16.000

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	6309.	6309.	6309.
45	6170.	6911.	7211.
55	6026.	7061.	7284.
65	5755.	7003.	7549.
75	4977.	7398.	7700.
85	2317.	3523.	2436.



Approved By: MG



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD
EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

Table with 10 rows (RC 0-10) and 10 columns (RW 70, 50, 30, 10) for each of the four cavity types (70, 50, 30, 10). Values range from 29 to 105.

CANDELA DISTRIBUTION

Table with 11 rows (0-90) and 6 columns showing candela values for different beam angles.

ZONAL LUMEN SUMMARY

Table with 10 rows showing lumen values for beam angle ranges from 0-5 to 85-90 degrees.

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE DATA FOR OTHER BALLAST/LAMP COMBINATIONS MAY PRODUCE ERRONEOUS RESULTS. 2) ACCORDING TO IESNA PROCEDURES, THE BALLAST(S) AND LAMP(S) ARE PRESUMED TO PRODUCE 100% OF RATED OUTPUT. AN APPROPRIATE BALLAST FACTOR MUST BE APPLIED TO THE LUMEN OUTPUT RATINGS AND LUMINOUS INTENSITY VALUES GIVEN. 3) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT WHERE THE AMBIENT TEMPERATURE WAS HELD AT 25°C ±1°C. FIELD PERFORMANCE MAY DIFFER PARTICULARLY IN REGARDS TO CHANGE IN LUMINOUS OUTPUT AS A RESULT OF DIFFERENCE IN AMBIENT TEMPERATURE AND METHOD OF MOUNTING THE LUMINAIRE.