



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

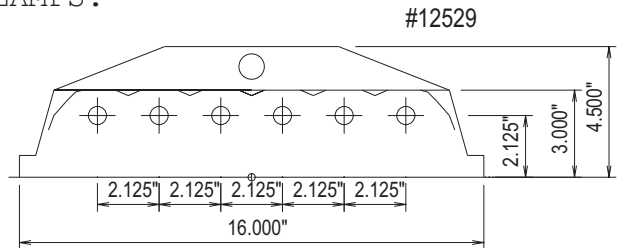
LTL NUMBER: 12529 DATE: 01-17-2008
 PREPARED FOR: RENOVA LIGHTING SYSTEMS, INC.
 CATALOG NUMBER: ECS-ECO4-MN-654-UNV-32H-00W
 LUMINAIRE: FORMED STEEL HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR,
 NO ENCLOSURE.
 LAMPS: SIX 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMPS RATED AT
 4400 LUMENS EACH.
 LAMP CATALOG NUMBER: PHILIPS F54T5/841/HO/ALTO
 BALLASTS: THREE SYLVANIA QTP2X54T5HO/UNV PSN HT
 MOUNTING: PENDANT
 LUMEN TO CANDELA RATIO USED = 9.18
 TOTAL INPUT WATTS =316.1 AT 120.0 VOLTS
 THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	5975	5975	5975	5975	5975
5	5955	6149	6474	6758	6892
15	5757	7039	8761	9308	9496
25	5341	7971	9168	8571	8118
35	4724	7730	6832	5666	5544
45	3928	6563	4626	4638	4568
55	2994	3939	3522	2971	3099
65	1990	2328	2306	3104	3022
75	1007	1127	1582	1793	1746
85	166	317	199	185	181
90	0	0	0	0	0

FLUX

645
2318
3720
3989
3851
3060
2514
1554
295



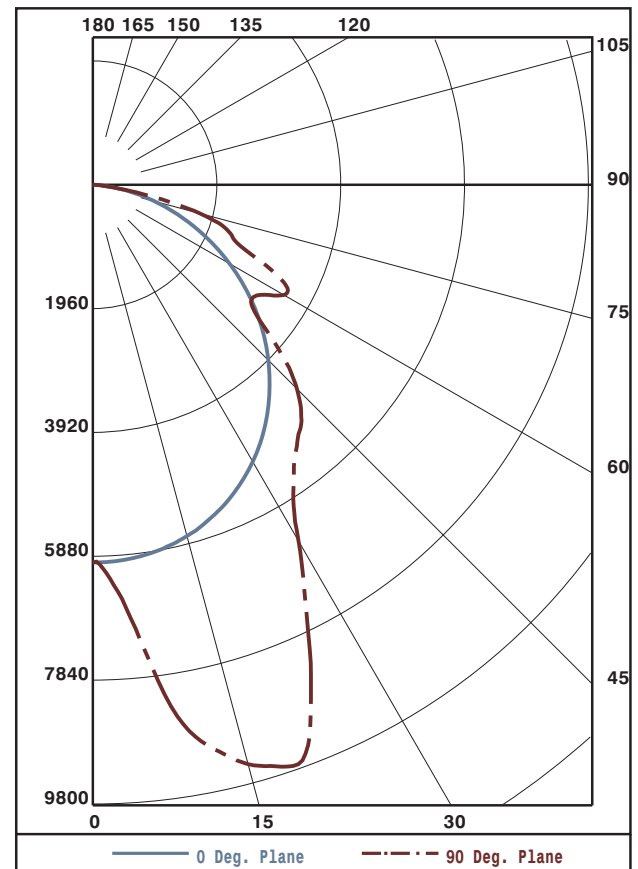
ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	6684	25.3	30.5
0- 40	10673	40.4	48.6
0- 60	17584	66.6	80.1
0- 90	21947	83.1	100.0
90-180	0	0.0	0.0
0-180	21947	83.1	100.0

TOTAL LUMINAIRE EFFICIENCY: 83.1%
 CIE TYPE: DIRECT
 PLANE: 0-DEG 90-DEG
 SPACING CRITERIA: 1.3 1.4
 LUMINOUS LENGTH: 46.750 16.000

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	12380.	12380.	12380.
45	11510.	13556.	13386.
55	10816.	12723.	11195.
65	9757.	11306.	14816.
75	8062.	12665.	13978.
85	3946.	4731.	4303.



Approved By: *MG*



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

Table with 19 columns (RC, RW, 80, 70, 50, 30, 10, 0) and 11 rows of utilization coefficients.

CANDELA DISTRIBUTION

Table with 6 columns showing candela values for various angles from 0 to 90 degrees.

ZONAL LUMEN SUMMARY

Table with 3 columns showing cumulative lumen values for various zones 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.