



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: 13906

DATE: 10-27-2008

PREPARED FOR: USA ILLUMINATION

CATALOG NUMBER: 1646-TRIM/BL460-HOUSING/(2) 39W CMHMR16 MAX TILT

LUMINAIRE: FORMED STEEL HOUSING, CAST WHITE ENAMEL ALUMINUM AND STEEL TRIM WITH FROSTED GLASS ENCLOSURE.

LAMPS: TWO VBU M130 39 WATT CERAMIC METAL HALIDE MR16 LAMPS RATED AT 2100 LUMENS EACH.

LAMP CATALOG NUMBER: GE CMH39MR16/930/FL

BALLASTS: TWO METROLIGHT SUPER HID 39

MOUNTING: RECESSED

TOTAL INPUT WATTS = 88.5 AT 120.0 VOLTS

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	FLUX
0	1531	1531	1531	1531	1531	1531	1531	1531	1531	
5	2227	2154	1959	1720	1476	1272	1137	1057	1035	149
15	3777	3357	2441	1623	1086	777	621	543	521	442
25	3842	3173	1935	1111	694	481	378	325	309	580
35	2187	1810	1104	656	428	308	242	198	183	465
45	788	716	540	367	263	200	161	137	132	278
55	238	247	241	210	172	142	116	105	101	158
65	50	63	88	112	106	88	68	62	59	80
75	11	12	13	34	36	32	24	24	25	27
85	0	1	1	1	2	3	4	4	4	3
90	0	0	0	0	0	0	0	0	0	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	1171	27.9	53.7
0- 40	1636	38.9	75.0
0- 60	2072	49.3	95.0
0- 90	2182	52.0	100.0
90-180	0	0.0	0.0
0-180	2182	52.0	100.0

TOTAL LUMINAIRE EFFICIENCY: 52.0%

CIE TYPE: DIRECT

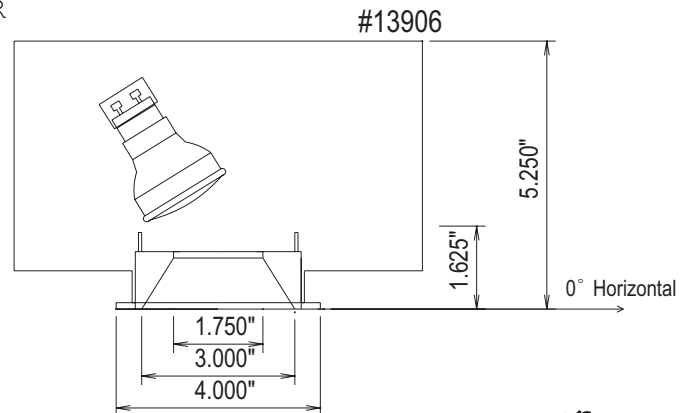
PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 1.6 0.7 0.3

LUMINOUS LENGTH: 3.000 5.250

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	150659.	150659.	150659.
45	109663.	75150.	36601.
55	40832.	41347.	29509.
65	11642.	20491.	24682.
75	4182.	4943.	13688.
85	0.	1129.	2258.



Approved By: MG

THIS REPORT BASED ON LM-46 AND OTHER PERTINENT IESNA PROCEDURES.



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: 13906
PREPARED FOR: USA ILLUMINATION

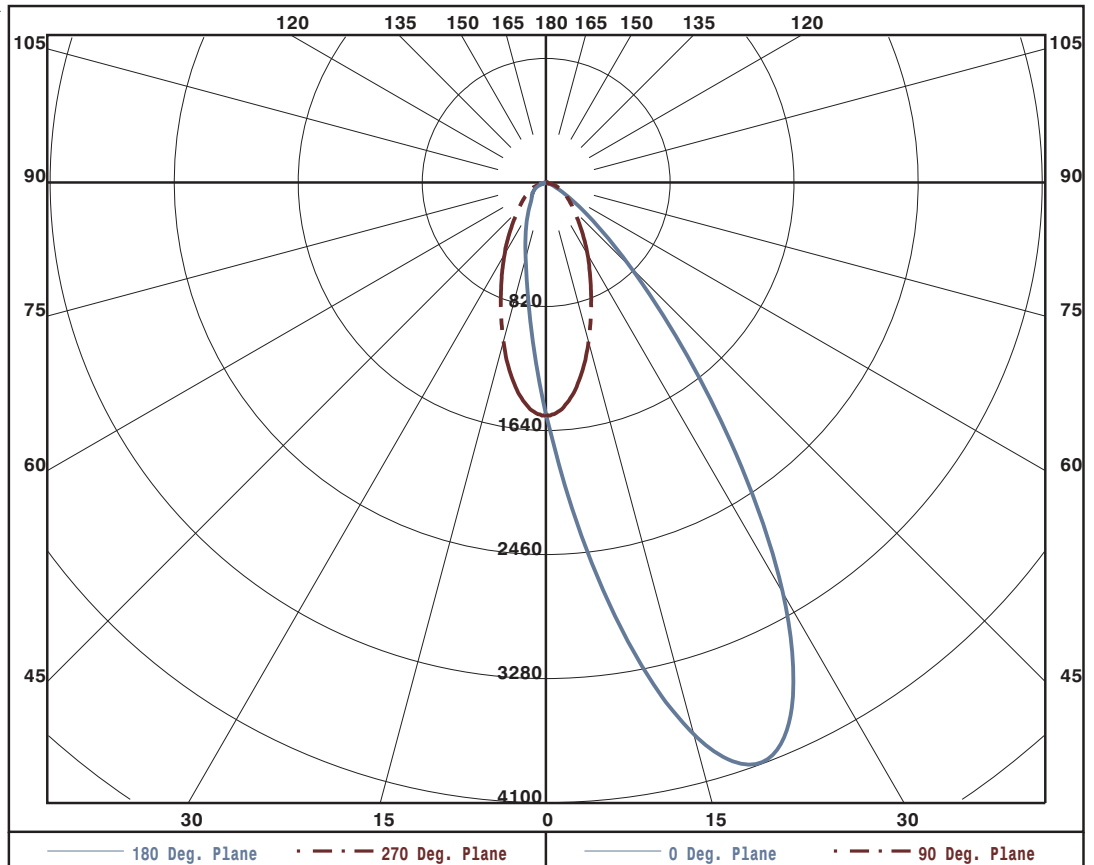
DATE: 10-27-2008

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	1531	1531	1531	1531	1531	1531	1531	1531	1531
5	2227	2154	1959	1720	1476	1272	1137	1057	1035
10	3061	2840	2312	1752	1308	1004	830	741	711
15	3777	3357	2441	1623	1086	777	621	543	521
20	4089	3490	2294	1383	874	605	478	416	397
25	3842	3173	1935	1111	694	481	378	325	309
30	3130	2540	1502	863	549	386	300	256	242
35	2187	1810	1104	656	428	308	242	198	183
40	1354	1171	787	490	333	245	197	159	151
45	788	716	540	367	263	200	161	137	132
50	440	425	363	277	212	168	136	122	117
55	238	247	241	210	172	142	116	105	101
60	119	134	154	156	137	115	93	85	82
65	50	63	88	112	106	88	68	62	59
70	19	20	40	74	74	60	44	37	37
75	11	12	13	34	36	32	24	24	25
80	5	5	6	8	10	12	13	13	13
85	0	1	1	1	2	3	4	4	4
90	0	0	0	0	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	37.
5- 10	112.
10- 15	189.
15- 20	253.
20- 25	290.
25- 30	290.
30- 35	257.
35- 40	207.
40- 45	159.
45- 50	119.
50- 55	91.
55- 60	68.
60- 65	49.
65- 70	32.
70- 75	19.
75- 80	8.
80- 85	3.
85- 90	0.





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: 13906

DATE: 10-27-2008

PREPARED FOR: USA ILLUMINATION

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	62	62	62	62	60	60	60	60	58	58	58	55	55	55	53	53	53	52
1	59	57	55	54	57	56	55	53	54	53	52	52	51	50	50	49	49	48
2	55	52	50	48	54	51	49	47	50	48	46	48	47	45	47	45	44	43
3	52	48	45	43	51	47	45	42	46	44	42	45	43	41	43	42	40	40
4	49	44	41	38	48	44	41	38	42	40	38	41	39	37	40	38	37	36
5	46	41	37	35	45	40	37	34	39	36	34	38	36	34	37	35	33	33
6	43	38	34	32	42	37	34	31	36	33	31	36	33	31	35	33	31	30
7	40	35	31	29	40	34	31	29	34	31	28	33	30	28	32	30	28	27
8	38	32	28	26	37	32	28	26	31	28	26	31	28	26	30	27	26	25
9	35	29	26	23	35	29	26	23	29	25	23	28	25	23	28	25	23	22
10	33	27	24	21	32	27	24	21	26	23	21	26	23	21	26	23	21	20

NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) 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. 2) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT, FIELD PERFORMANCE MAY DIFFER.