



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300



## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-10-2014

Prepared For  
**Mercury Lighting**  
20 Audrey Pl  
Fairfield, NJ 07004-3416  
United States

Catalog Number  
**MLW2-M-2-740 (400 LMFT)-930K-A201-U**  
Order Number  
13237814  
Test Number  
13237814.01D

Revision of Test Number 13237814.01C on:  
2020-06-09  
Test Date  
2020-02-12

Prepared By

Bhavik Shah, Laboratory Leader

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Black formed aluminum housing, gray plastic reflectors  
**Lamp:** 28 White LEDs  
**Mounting:** Surface – Wall  
**Ballast/Driver:** one philips xitanium XI020C056V054BST2 driver

**Luminaire**



**Luminaire Characteristics**

Luminous Length: 0.50 in.  
Luminous Width: 22.00 in.  
Luminous Height: 1.25 in.

**Summary of Results**

Total Luminaire Output: 738.4 Lumens  
Luminaire Efficacy: 36.8 lm/w  
Maximum Candela: 696 Candela

**Test Conditions**

Test Temperature: 24.5 °C  
Voltage: 120.0 VAC  
Current: 0.1679 A  
Power: 20.06 W  
Power Factor: 0.995  
Frequency: 60 Hz  
Current THD: 7.90 %

Laboratory results may not be representative of field performance  
Ballast factors have not been applied



## Distribution - Goniophotometer

### Distribution Test Conditions

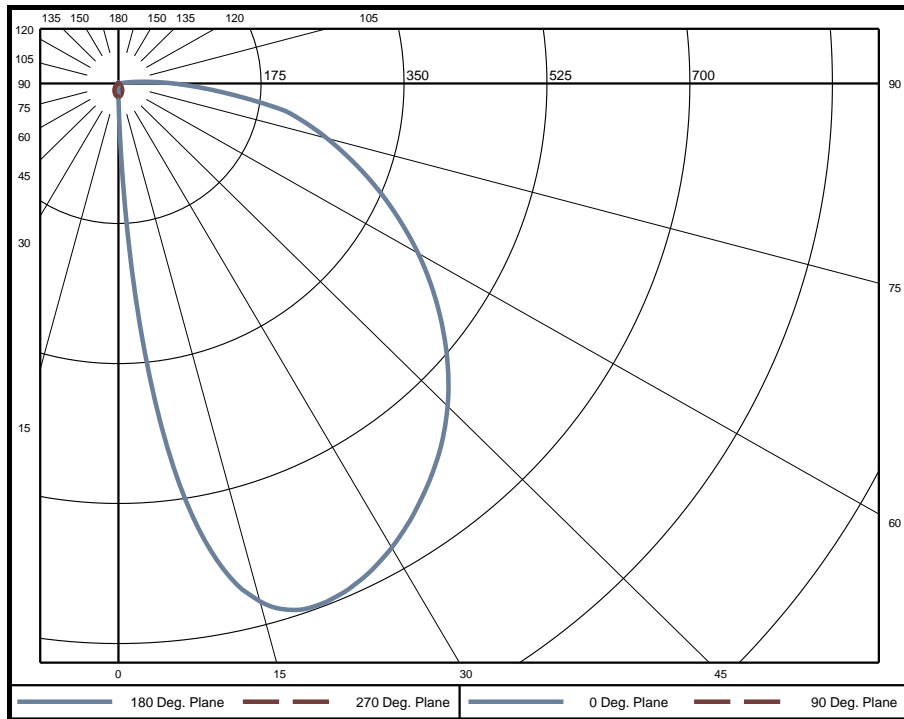
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1679 A	20.06 W	0.995	60 Hz	7.90 %

### Summary of Results

**Spacing Criteria**  
 0-180: 6.18  
 90-270: 0.90

**Total Lumen Output:** 738.4 Lumens  
**Luminaire Efficacy:** 36.8 lm/w  
**Maximum Candela:** 696 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.46	0.2%	60-65	49.07	6.6%	120-125	0	0.0%
5-10	10.60	1.4%	65-70	43.51	5.9%	125-130	0	0.0%
10-15	24.89	3.4%	70-75	37.41	5.1%	130-135	0	0.0%
15-20	38.58	5.2%	75-80	31.15	4.2%	135-140	0	0.0%
20-25	49.34	6.7%	80-85	23.18	3.1%	140-145	0	0.0%
25-30	56.60	7.7%	85-90	12.78	1.7%	145-150	0	0.0%
30-35	60.90	8.2%	90-95	0	0.0%	150-155	0	0.0%
35-40	62.67	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	62.69	8.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	61.19	8.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	58.24	7.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	54.10	7.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	305	41.3%
0-60	541	73.3%
0-90	738	100.0%
90-180	0	0.0%



**Candela Tabulation**  
Horizontal Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
5	304.0	293.1	203.1	87.4	16.2	7.0	2.5	2.3	2.0	2.3	2.5	7.0	16.2	87.4	203.1	293.1
10	564.7	542.1	420.4	203.8	15.5	2.3	1.9	1.7	1.4	1.7	1.9	2.3	15.5	203.8	420.4	542.1
15	669.9	644.8	525.4	284.3	14.2	1.9	1.4	1.1	0.9	1.1	1.4	1.9	14.2	284.3	525.4	644.8
20	696.0	671.4	552.1	313.3	12.7	1.5	1.0	0.7	0.5	0.7	1.0	1.5	12.7	313.3	552.1	671.4
25	689.3	659.0	530.1	299.9	11.1	1.3	0.7	0.4	0.3	0.4	0.7	1.3	11.1	299.9	530.1	659.0
30	669.9	634.2	486.4	261.1	9.6	1.0	0.5	0.3	0.2	0.3	0.5	1.0	9.6	261.1	486.4	634.2
35	641.7	602.8	434.6	212.9	8.1	0.9	0.3	0.2	0.2	0.2	0.3	0.9	8.1	212.9	434.6	602.8
40	609.3	565.8	383.0	167.2	6.6	0.7	0.3	0.1	0.1	0.1	0.3	0.7	6.6	167.2	383.0	565.8
45	570.5	524.4	338.0	129.4	5.1	0.6	0.2	0.1	0.1	0.1	0.2	0.6	5.1	129.4	338.0	524.4
50	525.3	478.4	295.9	100.5	3.9	0.4	0.1	0.1	0.1	0.1	0.1	0.4	3.9	100.5	295.9	478.4
55	475.8	427.9	254.3	79.2	2.9	0.3	0.1	0.1	0.1	0.1	0.1	0.3	2.9	79.2	254.3	427.9
60	424.1	376.5	216.0	64.5	2.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	2.3	64.5	216.0	376.5
65	370.3	324.9	181.5	52.4	1.7	0.1	0.1	0.1	0.0	0.1	0.1	0.1	1.7	52.4	181.5	324.9
70	316.7	275.5	151.2	42.9	1.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	1.2	42.9	151.2	275.5
75	264.7	226.6	123.2	35.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.8	35.0	123.2	226.6
80	213.1	180.4	97.9	28.6	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	28.6	97.9	180.4
85	129.6	108.7	63.9	22.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	22.0	63.9	108.7
90	68.2	54.1	26.5	7.3	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	7.3	26.5	54.1
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Average Luminance (cd/m<sup>2</sup>)**

Horizontal Angle (Degrees)

	0	45	90
0	2428	2428	2428
45	32480	23990	967
55	25580	17440	669
65	19410	12410	501
75	13950	8659	345
85	7086	4768	189

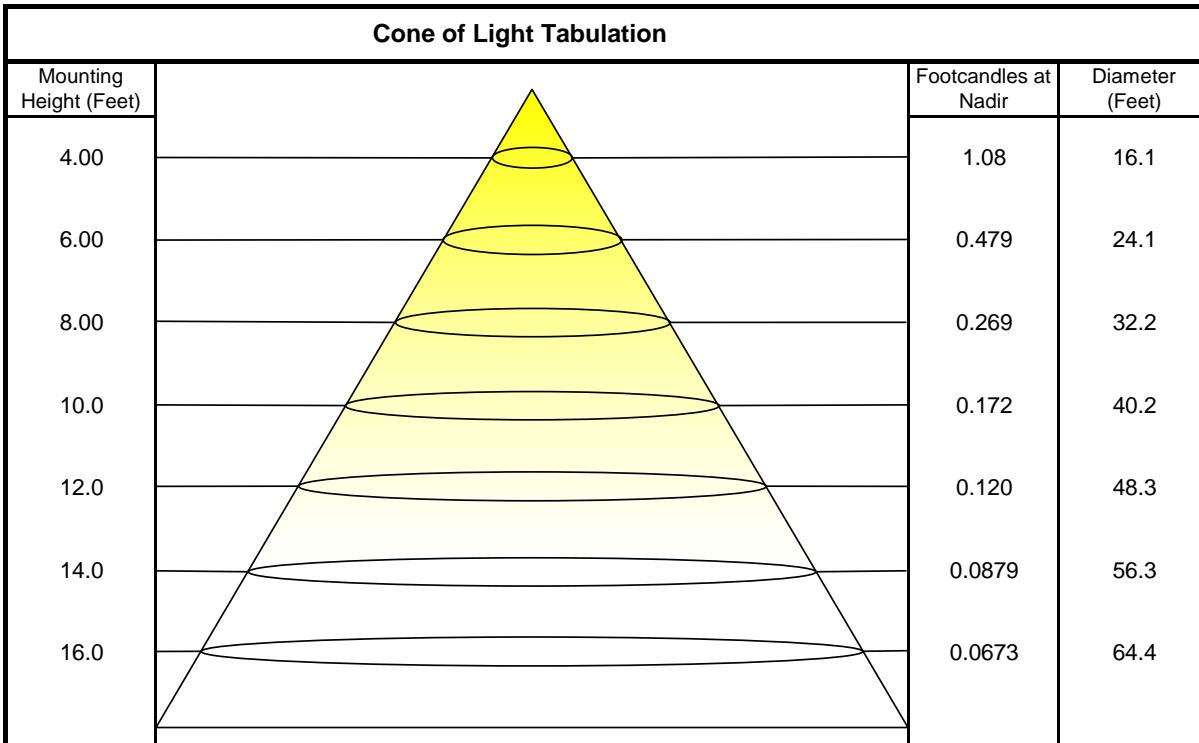


### Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as percent of total lumen output delivered to the task surface **																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	107	102	97	92	104	99	95	91	95	91	88	91	88	85	87	85	82	80
2	97	88	80	74	94	86	79	73	82	76	71	79	74	69	76	72	68	66
3	88	76	68	61	85	75	67	60	72	65	59	69	63	58	66	61	57	55
4	80	67	58	51	78	66	57	51	63	56	50	61	54	49	59	53	48	46
5	74	60	50	44	71	59	50	43	57	49	43	55	48	42	53	47	42	40
6	68	54	44	38	66	53	44	38	51	43	37	49	42	37	48	41	36	34
7	63	49	39	33	61	48	39	33	46	38	33	45	38	32	43	37	32	30
8	58	44	35	29	57	44	35	29	42	34	29	41	34	29	40	33	29	27
9	54	40	32	26	53	40	32	26	39	31	26	38	31	26	37	30	26	24
10	51	37	29	24	50	37	29	24	36	28	23	35	28	23	34	28	23	21

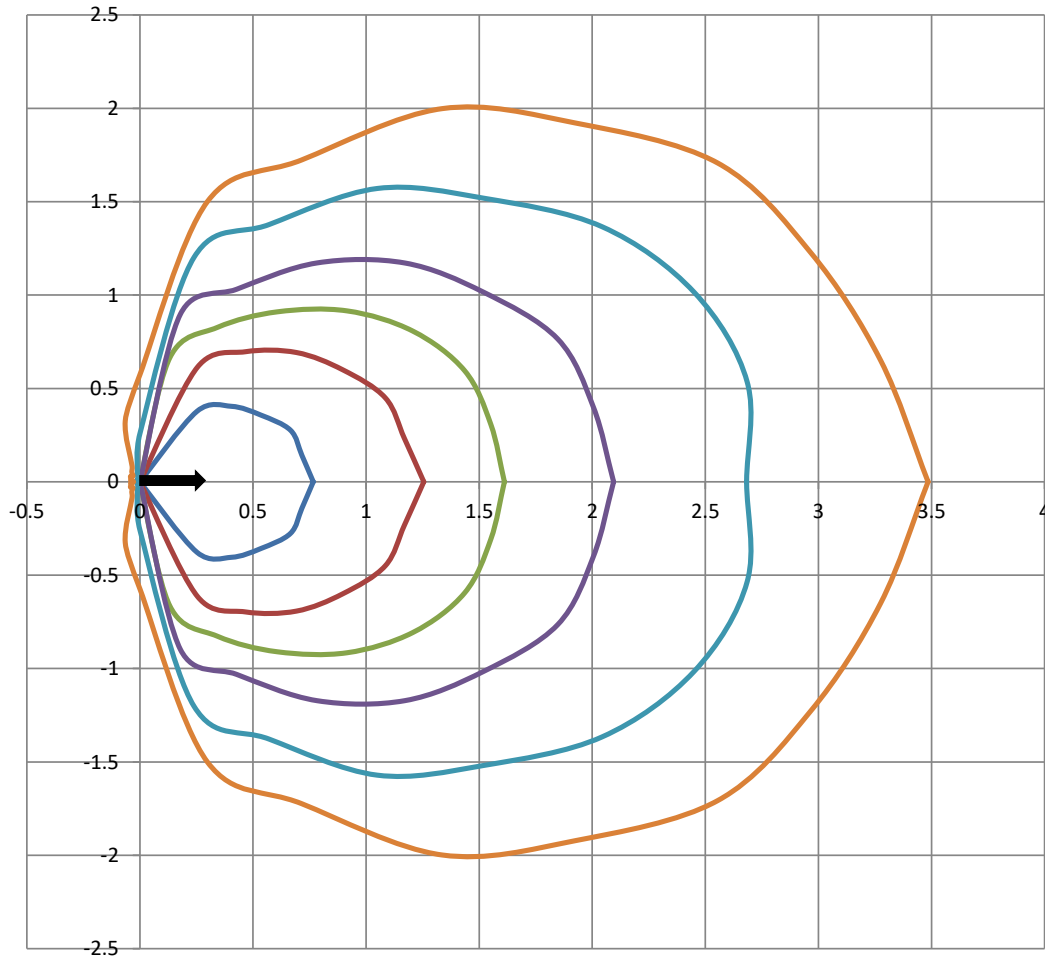
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	17.2 Candela
Central Cone Intensity:	49 Candela
Beam Flux:	736.3 Lumens
Beam Angle (0-180):	91.7 Degrees
Beam Angle (90-270):	66.8 Degrees
Field Angle (0-180):	97.8 Degrees
Field Angle (90-270):	129.3 Degrees





# ISOFootcandle Plot

Mounting Height - 8 Feet

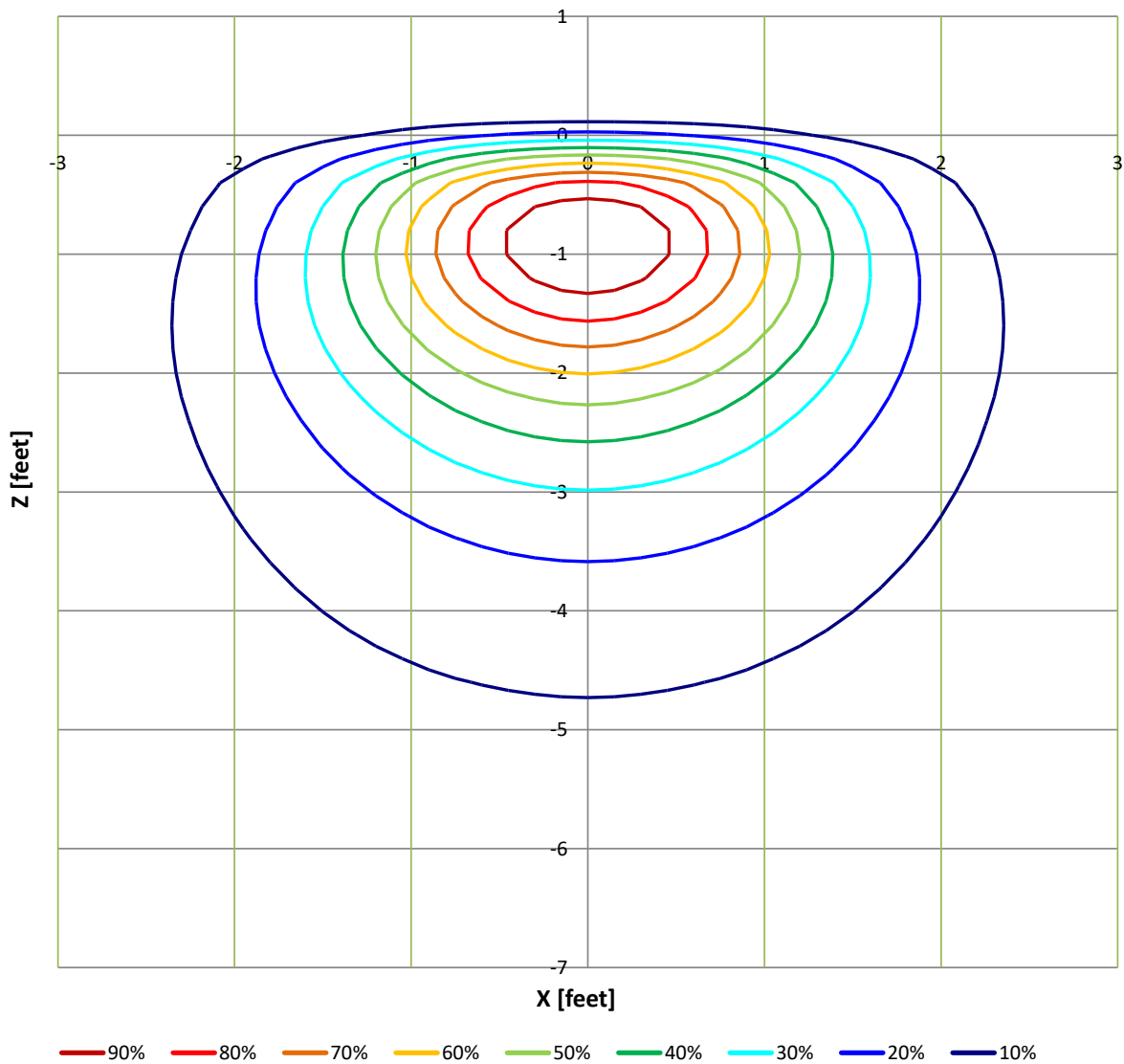


Grid Lines in Units of Mounting Height





### Wall Illuminance Contour Plot percent of maximum illuminance



Mounting Offset = 1.6 Feet

#### Uniformity Data

Max Illuminance	85.4 fc
Ave Illuminance	12.6 fc