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Allentown, PA 18106
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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-G-48-400-930K-1%-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

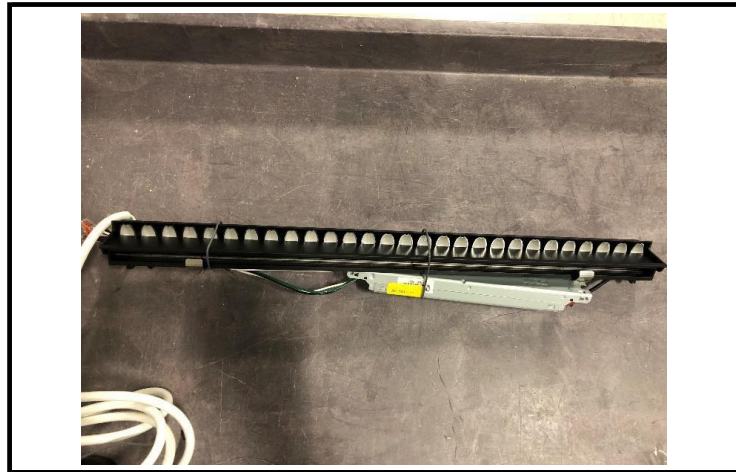
Alexa Lambert, Project Handler

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

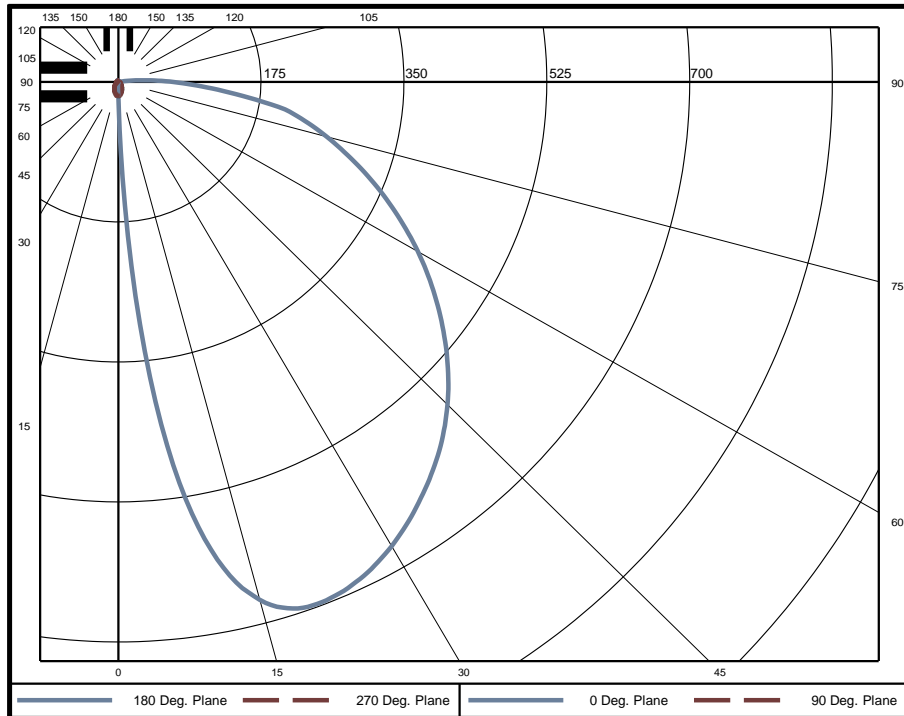
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1679 A	20.06 W	0.995	60 Hz	7.90 %

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)

Vertical Angle (Degrees)	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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	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

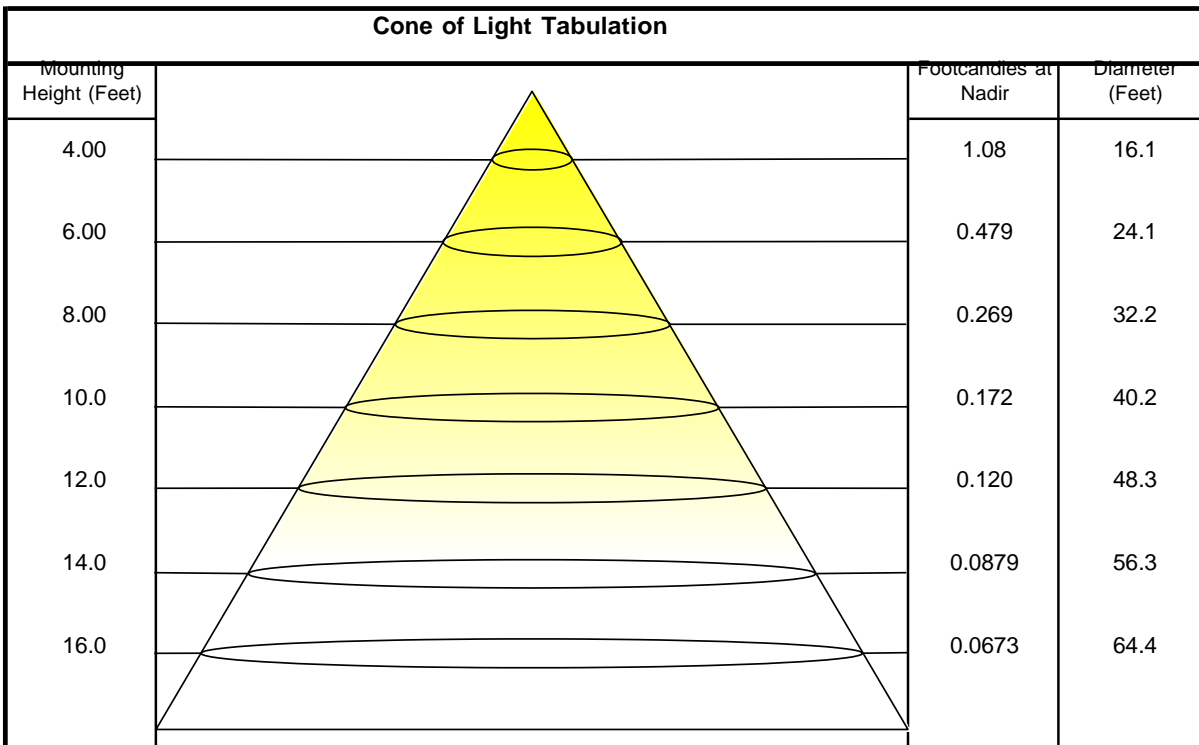


Coefficients of Utilization - Zonal Cavity Method

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

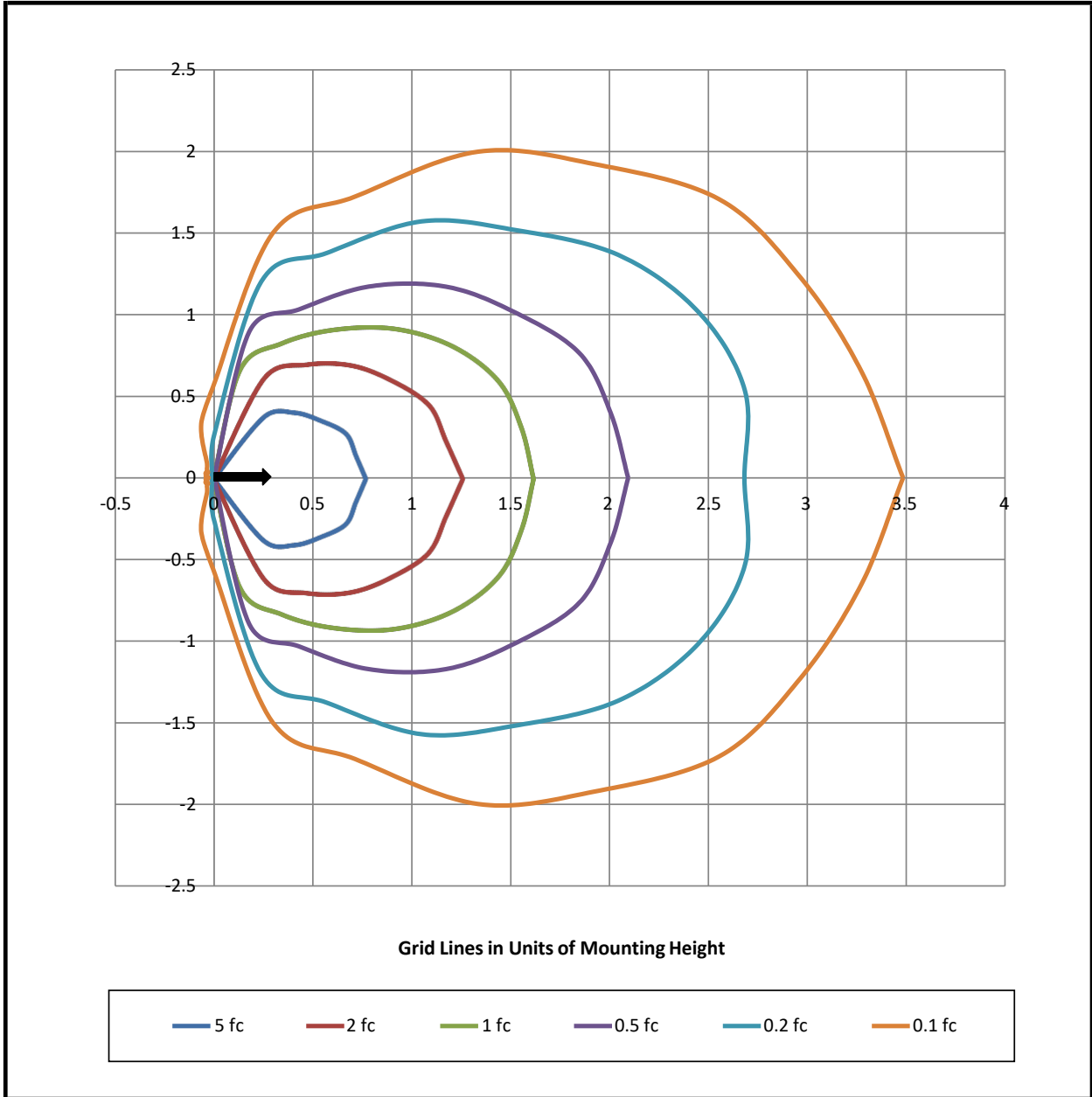
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	17.2 Candela
Central Cone Intensity:	49 Candela
Beam Flux:	736.3 Lumens
Beam Angle (0-180):	91.7 Degrees
Beam Angle (90-270):	66.8 Degrees
Field Angle (0-180):	97.8 Degrees
Field Angle (90-270):	129.3 Degrees





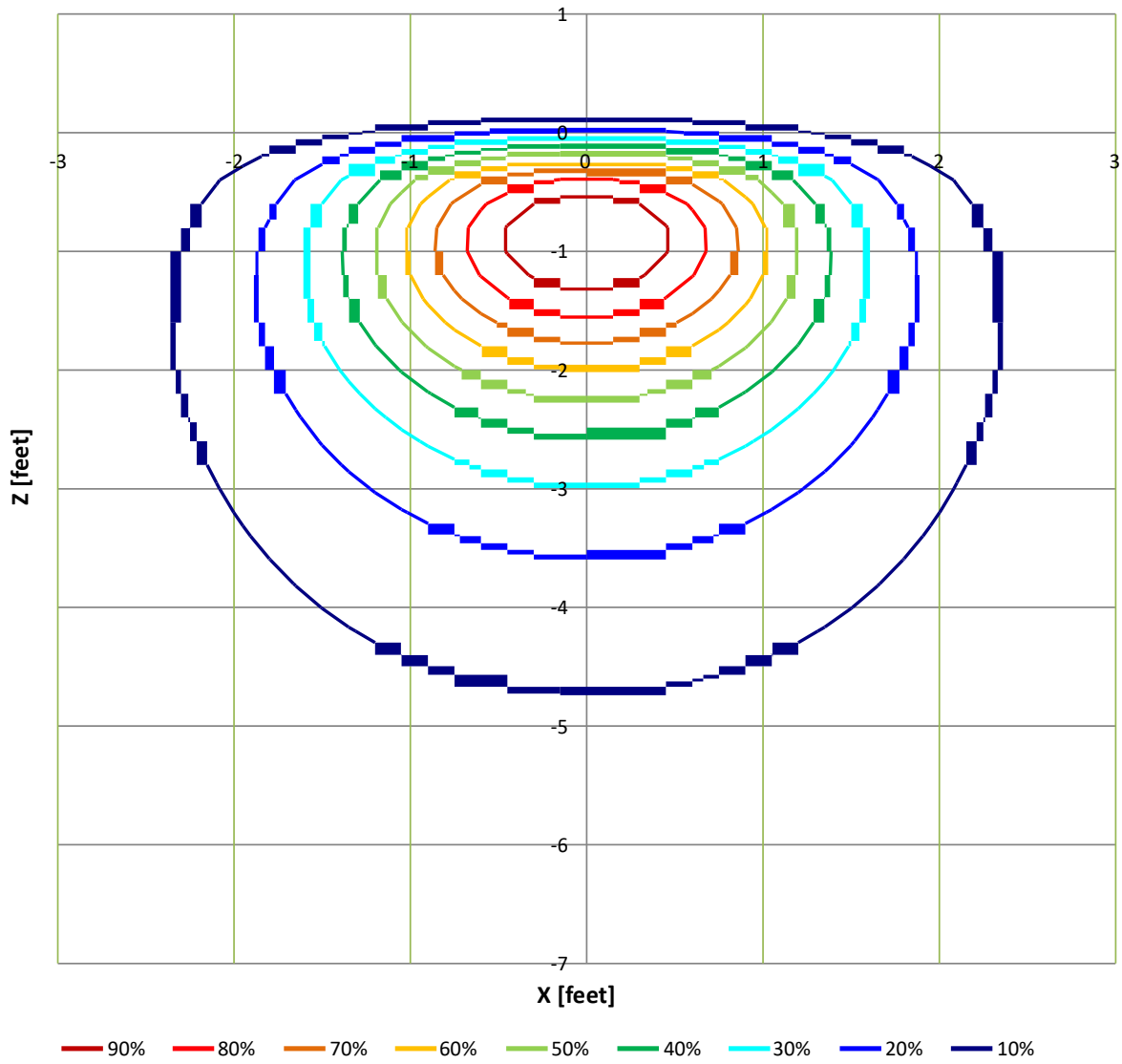
ISOFootcandle Plot

Mounting Height - 8 Feet





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