

Project Number
15.00439



Date
3/16/2015
Revision Date
3/18/2015

LAB 1

Test Sample Description

Catalog Number: P3447-2030K9
Description: HELM - 11" LED FLUSH MOUNT w/ White Acrylic Diffuser

REVISION: Changed Cat. Logic from.....P2301-2030K9

Test Method: IES LM-79-08 § 10
Preburn Time: 00:10
Time To Stabilize: 1:31
Total Operating Time: 2:26
Input Voltage (Volts): 120.0
Input Current (Amps): 0.155
Input Wattage (Watts): 17.3
Ambient Temp (°C): 25.0



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Checked: D. ROBBINS
Approved: M. WASHBURN





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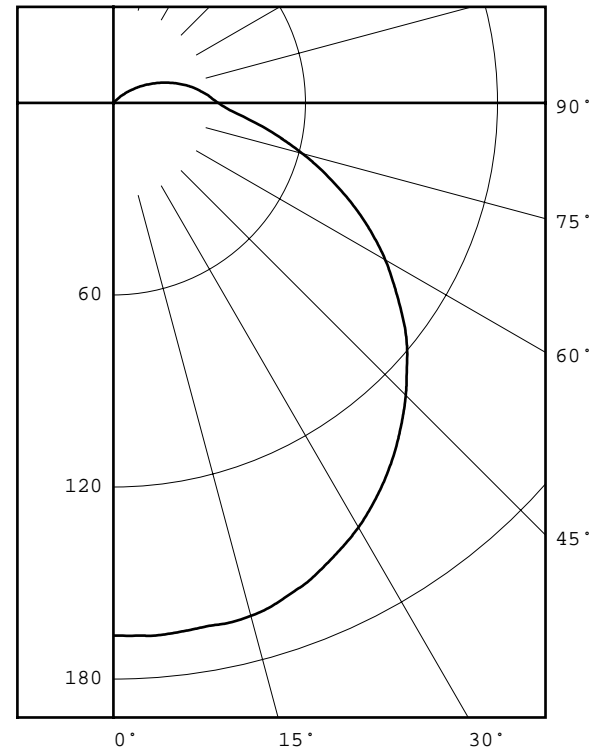
REPORT NUMBER: 15.00439
ISSUE DATE: 03/16/15
REVISED: 03/18/2015
PREPARED FOR: PROGRESS
CATALOG NUMBER: P3447-2030K9
LUMINAIRE: HELM - 11" LED FLUSH MOUNT w/ White Acrylic Diffuser
LAMP CAT. NO.: 93047261-4130 Module
LAMP: 40 - Nichia 3000K LEDs w/ HAL 17W, 120V module
MOUNTING: Ceiling
NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.

PAGE: 2 OF 10

DEG	CANDELA	LUMENS
0	166	
5	167	16
15	166	47
25	159	73
35	146	92
45	129	100
55	109	98
65	86	85
75	61	65
85	39	43
90	33	
95	29	32
105	22	24
115	15	15
125	7	7
135	0	1
145	0	0
155	0	0
165	0	0
175	0	0
180	0	0

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	136	19.5
0- 40	227	32.7
0- 60	425	61.0
0- 90	618	88.8
90-120	70	10.1
90-130	77	11.0
90-150	78	11.2
90-180	78	11.2
0-180	696	100.0

TOTAL INPUT WATTS = 17.3
EFFICACY = 40.2 Lm/W
CIE TYPE - SEMI-DIRECT
LUMINAIRE SPACING CRITERION = 1.4





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PAGE: 3 OF 10

PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 8.000 8.000
HEIGHT OF SIDE : 2.500 2.500

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	3370.
55	3181.
65	2957.
75	2638.
85	2363.



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PAGE: 4 OF 10

CANDELA DISTRIBUTION

	0.0
0.0	166
5.0	167
10.0	166
15.0	166
20.0	163
25.0	159
30.0	153
35.0	146
40.0	138
45.0	129
50.0	120
55.0	109
60.0	98
65.0	86
70.0	74
75.0	61
80.0	49
85.0	39
90.0	33
95.0	29
100.0	26
105.0	22
110.0	18
115.0	15
120.0	11
125.0	7
130.0	4
135.0	0
140.0	0
145.0	0
150.0	0
155.0	0
160.0	0
165.0	0
170.0	0
175.0	0
180.0	0



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PAGE: 5 OF 10

ZONAL LUMEN SUMMARY

0- 5	4.
5- 10	12.
10- 15	20.
15- 20	27.
20- 25	34.
25- 30	39.
30- 35	44.
35- 40	47.
40- 45	49.
45- 50	50.
50- 55	50.
55- 60	48.
60- 65	45.
65- 70	40.
70- 75	35.
75- 80	29.
80- 85	24.
85- 90	19.
90- 95	17.
95-100	15.
100-105	13.
105-110	11.
110-115	8.
115-120	6.
120-125	4.
125-130	3.
130-135	1.
135-140	0.
140-145	0.
145-150	0.
150-155	0.
155-160	0.
160-165	0.
165-170	0.
170-175	0.
175-180	0.



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PAGE: 6 OF 10

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	4
5- 10	12
10- 15	20
15- 20	27
20- 25	34
25- 30	39
30- 35	44
35- 40	47
40- 45	49
45- 50	50
50- 55	50
55- 60	48
60- 65	45
65- 70	40
70- 75	35
75- 80	29
80- 85	24
85- 90	19
90- 95	17
95-100	15
100-105	13
105-110	11
110-115	8
115-120	6
120-125	4
125-130	3
130-135	1
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	16
0- 20	63
0- 30	136
0- 40	227
0- 50	327
0- 60	425
0- 70	510
0- 80	575
0- 90	618
0-100	650
0-110	674
0-120	688
0-130	695
0-140	696
0-150	696
0-160	696
0-170	696
0-180	696



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PAGE: 7 OF 10

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	76	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	70	62	56	66	59	53	62	56	51	58	53	49	46
4	77	64	55	47	74	62	53	47	58	51	45	54	48	43	51	45	41	38
5	71	57	47	40	68	55	46	40	52	44	38	48	42	37	45	40	35	33
6	65	51	42	35	62	49	41	34	46	39	33	44	37	32	41	35	31	28
7	60	46	37	31	58	45	36	30	42	34	29	40	33	28	37	32	27	25
8	56	42	33	27	54	41	32	27	38	31	26	36	30	25	34	28	24	22
9	52	38	30	24	50	37	29	24	35	28	23	33	27	22	32	26	22	20
10	49	35	27	22	47	34	27	21	32	26	21	31	25	20	29	24	20	18

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.

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Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-38

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 25753.0 Lumens

Calibration Date: 12/02/2014

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
Goniophotometer	ITL / HLI LAB 1- Test Distance: 31.75'	N/A	
Power Analyzer	Yokogawa / WT 332	C2QA27071V	11/12/2015
Power Source	Voltage-Regulated House Power	N/A	N/A
Thermometer	National Instruments / USB-TC01	176F4E3	11/11/2015

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