

Project Number  
15.00440



**HUBBELL**  
Lighting

Date  
3/17/2015

LAB 1

### Test Sample Description

Catalog Number: P3448-2030K9  
Description: HELM - 14" LED FLUSH MOUNT w/ White Acrylic Diffuser

Test Method: IES LM-79-08 § 10  
Preburn Time: 00:10  
Time To Stabilize: 3:49  
Total Operating Time: 4:26  
  
Input Voltage (Volts): 120.1  
Input Current (Amps): 0.303  
Input Wattage (Watts): 33.8  
Ambient Temp (°C): 25.1



### Hubbell Lighting, Inc.

701 Millennium Boulevard  
Greenville, SC 29607  
www.hubbellighting.com

Checked: D. ROBBINS  
Approved: M. WASHBURN

This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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CATALOG NUMBER: P3448-2030K9

LUMINAIRE: HELM - 14" LED FLUSH MOUNT w/ White Acrylic Diffuser

LAMP CAT. NO.: 93047261-4130 Module

LAMP: 80 - (2) Modules Nichia 3000K LEDs w/ HAL 17W, 120V modules

MOUNTING: Ceiling

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

DEG	CANDELA	LUMENS
0	340	
5	340	32
15	337	95
25	321	148
35	293	184
45	257	198
55	214	191
65	166	164
75	115	122
85	71	79
90	56	
95	50	55
105	38	40
115	24	24
125	12	11
135	0	2
145	0	0
155	0	0
165	0	0
175	0	0
180	0	0

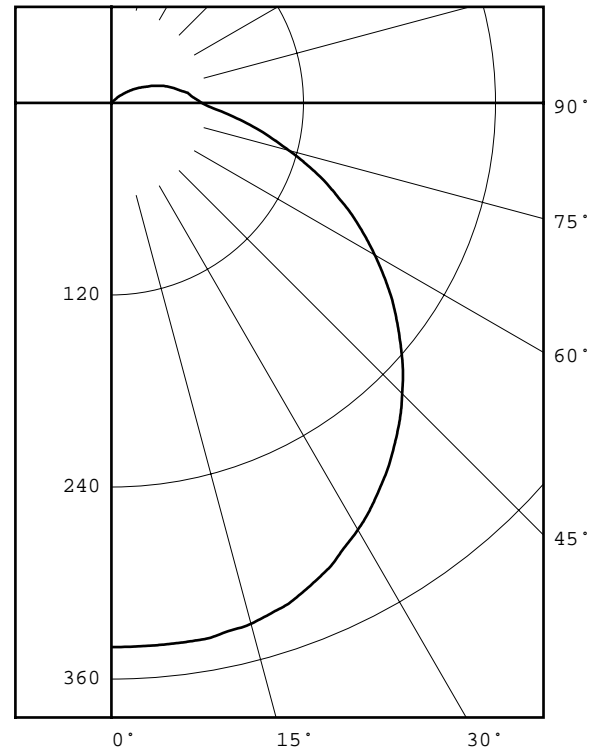
ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	275	20.5
0- 40	459	34.1
0- 60	849	63.1
0- 90	1213	90.2
90-120	119	8.9
90-130	130	9.7
90-150	132	9.8
90-180	132	9.8
0-180	1345	100.0

TOTAL INPUT WATTS = 33.8

EFFICACY = 39.8 Lm/W

CIE TYPE - DIRECT

LUMINAIRE SPACING CRITERION = 1.3





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PLANE : 0-DEG 90-DEG  
LUMINOUS LENGTH : 11.500 11.500  
HEIGHT OF SIDE : 3.000 3.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	3377.
55	3185.
65	2951.
75	2638.
85	2397.



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CANDELA DISTRIBUTION

	0.0
0.0	340
5.0	340
10.0	340
15.0	337
20.0	331
25.0	321
30.0	308
35.0	293
40.0	276
45.0	257
50.0	236
55.0	214
60.0	190
65.0	166
70.0	141
75.0	115
80.0	92
85.0	71
90.0	56
95.0	50
100.0	44
105.0	38
110.0	31
115.0	24
120.0	18
125.0	12
130.0	7
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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ZONAL LUMEN SUMMARY

0- 5	8.
5- 10	24.
10- 15	40.
15- 20	55.
20- 25	68.
25- 30	80.
30- 35	89.
35- 40	95.
40- 45	99.
45- 50	100.
50- 55	98.
55- 60	93.
60- 65	87.
65- 70	78.
70- 75	67.
75- 80	55.
80- 85	44.
85- 90	34.
90- 95	29.
95-100	26.
100-105	22.
105-110	18.
110-115	14.
115-120	10.
120-125	7.
125-130	4.
130-135	2.
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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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	8
5- 10	24
10- 15	40
15- 20	55
20- 25	68
25- 30	80
30- 35	89
35- 40	95
40- 45	99
45- 50	100
50- 55	98
55- 60	93
60- 65	87
65- 70	78
70- 75	67
75- 80	55
80- 85	44
85- 90	34
90- 95	29
95-100	26
100-105	22
105-110	18
110-115	14
115-120	10
120-125	7
125-130	4
130-135	2
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	32
0- 20	128
0- 30	275
0- 40	459
0- 50	657
0- 60	849
0- 70	1013
0- 80	1135
0- 90	1213
0-100	1268
0-110	1308
0-120	1333
0-130	1343
0-140	1345
0-150	1345
0-160	1345
0-170	1345
0-180	1345



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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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	104	99	94	89	100	95	91	87	89	85	82	84	81	78	78	76	74	71
2	94	85	77	71	90	82	75	69	77	71	66	72	67	63	67	64	60	57
3	85	74	65	58	82	71	63	57	67	60	54	63	57	52	59	54	50	47
4	78	65	55	48	74	63	54	47	59	52	46	55	49	44	52	47	42	40
5	71	58	48	41	68	56	47	40	53	45	39	50	43	38	47	41	36	34
6	66	52	42	36	63	50	41	35	47	40	34	45	38	33	42	36	32	29
7	61	47	38	31	58	45	37	31	43	35	30	41	34	29	38	33	28	26
8	56	42	34	28	54	41	33	27	39	32	26	37	31	26	35	29	25	23
9	53	39	30	25	51	38	30	24	36	29	24	34	28	23	32	27	22	20
10	49	36	28	22	47	35	27	22	33	26	21	32	25	21	30	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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