

Project Number
15.00744



Date
5/7/2015

LAB 6

Test Sample Description

Catalog Number: P3649-3030K9
Description: White Oval w/ AC HAL 9W LED Module

Test Method: IES LM-79-08 § 10
Preburn Time: 04:00
Time To Stabilize: 3:29
Total Operating Time: 8:25
Input Voltage (Volts): 120.1
Input Current (Amps): 0.073
Input Wattage (Watts): 8.2
Ambient Temp (°C): 24.6



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Checked: R. WILLIAMS
Approved: P. McCARTHY





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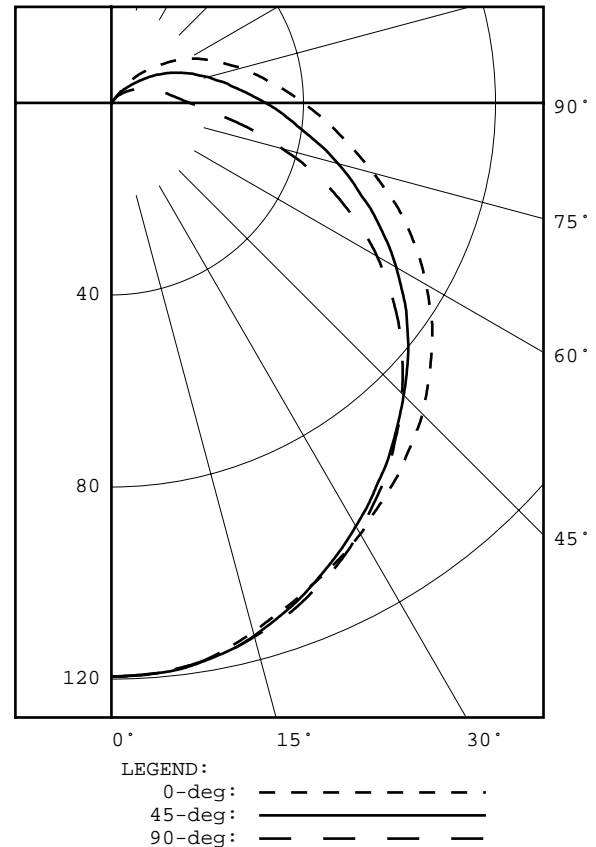
REPORT NUMBER: 15.00744
 ISSUE DATE: 05/07/15
 PREPARED FOR: PROGRESS
 CATALOG NUMBER: P3649-3030K9
 LUMINAIRE: White Oval w/ AC HAL 9W LED Module
 LENS: Opal Polycarbonate - Part# 93061255
 LAMP CAT. NO.: 93049180-3130
 LAMP: 20- Nichia 3000K LEDs
 MOUNTING: Ceiling
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE
 SAMPLE PROVIDED.

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CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	120	120	120	120	120	
5	119	119	119	119	119	11
15	114	114	115	115	115	32
25	107	107	107	108	108	49
35	100	99	97	97	98	61
45	92	90	86	84	86	67
55	82	79	75	71	72	67
65	70	67	62	57	55	62
75	57	54	49	42	37	51
85	45	43	37	29	21	39
90	40	38	32	24	16	
95	36	34	28	19	14	29
105	28	26	21	13	10	21
115	21	20	15	9	7	14
125	15	13	9	5	4	8
135	9	8	5	3	3	4
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	93	18.0
0- 40	155	29.9
0- 60	289	56.0
0- 90	441	85.2
90-120	64	12.4
90-130	72	14.0
90-150	77	14.8
90-180	77	14.8
0-180	517	100.0

TOTAL INPUT WATTS = 8.2
 EFFICACY = 63.0 Lm/W
 CIE TYPE - SEMI-DIRECT
 PLANE : 0-DEG 90-DEG
 SPACING CRITERIA : 1.3 1.3





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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 6.000 10.000
HEIGHT OF SIDE : 3.500 3.500

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	2113.	2144.	2316.
55	2004.	2024.	2149.
65	1892.	1890.	1930.
75	1774.	1780.	1592.
85	1743.	1731.	1250.



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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0.0	120	120	120	120	120
5.0	119	119	119	119	119
10.0	117	118	118	118	118
15.0	114	114	115	115	115
20.0	111	111	111	112	112
25.0	107	107	107	108	108
30.0	104	103	102	103	103
35.0	100	99	97	97	98
40.0	96	95	92	91	92
45.0	92	90	86	84	86
50.0	87	85	81	78	79
55.0	82	79	75	71	72
60.0	76	73	69	64	64
65.0	70	67	62	57	55
70.0	63	61	55	50	46
75.0	57	54	49	42	37
80.0	50	48	43	35	28
85.0	45	43	37	29	21
90.0	40	38	32	24	16
95.0	36	34	28	19	14
100.0	32	30	24	16	12
105.0	28	26	21	13	10
110.0	25	23	18	11	8
115.0	21	20	15	9	7
120.0	18	17	12	7	6
125.0	15	13	9	5	4
130.0	12	10	7	3	3
135.0	9	8	5	3	3
140.0	6	5	3	2	2
145.0	0	0	0	0	0
150.0	0	0	0	0	0
155.0	0	0	0	0	0
160.0	0	0	0	0	0
165.0	0	0	0	0	0
170.0	0	0	0	0	0
175.0	0	0	0	0	0
180.0	0	0	0	0	0



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ZONAL LUMEN SUMMARY

0- 5	3.
5- 10	8.
10- 15	14.
15- 20	19.
20- 25	23.
25- 30	27.
30- 35	30.
35- 40	32.
40- 45	33.
45- 50	34.
50- 55	34.
55- 60	33.
60- 65	32.
65- 70	30.
70- 75	27.
75- 80	24.
80- 85	21.
85- 90	18.
90- 95	15.
95-100	13.
100-105	11.
105-110	10.
110-115	8.
115-120	6.
120-125	5.
125-130	4.
130-135	2.
135-140	2.
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	3
5- 10	8
10- 15	14
15- 20	19
20- 25	23
25- 30	27
30- 35	30
35- 40	32
40- 45	33
45- 50	34
50- 55	34
55- 60	33
60- 65	32
65- 70	30
70- 75	27
75- 80	24
80- 85	21
85- 90	18
90- 95	15
95-100	13
100-105	11
105-110	10
110-115	8
115-120	6
120-125	5
125-130	4
130-135	2
135-140	2
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	11
0- 20	44
0- 30	93
0- 40	155
0- 50	222
0- 60	289
0- 70	351
0- 80	402
0- 90	441
0-100	469
0-110	490
0-120	505
0-130	513
0-140	517
0-150	517
0-160	517
0-170	517
0-180	517



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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	
0	116	116	116	116	111	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	102	96	91	86	98	92	88	83	85	81	78	79	76	73	73	70	68	65	
2	92	82	74	68	88	79	72	66	73	67	62	67	63	58	62	58	55	52	
3	83	71	62	55	79	69	60	54	63	56	51	59	53	48	54	49	45	42	
4	76	63	53	46	72	60	51	45	56	48	42	52	45	40	48	43	38	35	
5	69	56	46	39	66	54	45	38	50	42	36	46	40	34	43	37	33	30	
6	64	50	40	34	61	48	39	33	45	37	31	42	35	30	39	33	29	26	
7	59	45	36	29	56	43	35	29	40	33	28	38	31	26	35	29	25	23	
8	55	41	32	26	52	39	31	25	37	30	24	34	28	23	32	27	22	20	
9	51	37	29	23	49	36	28	23	34	27	22	32	25	21	30	24	20	18	
10	48	34	26	21	46	33	26	20	31	24	20	29	23	19	28	22	18	16	

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: 11/24/2014

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL / HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27076V	11/12/2015
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	11/11/2015

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