

**REPORT NUMBER:** ITL90572-GONIOPHOTOMETRY

**PAGE:** 1 OF 6

**ISSUE DATE:** 06/22/18

**PREPARED FOR:** PACE ELECTRONICS PRODUCTS

**ADDRESS:** 34 FOLEY DRIVE

SODUS, NY 14551

**CATALOG NUMBER:** PAC0435WH

**LUMINAIRE:** MOLDED WHITE PLASTIC HOUSING WITH WITH 2 MOLDED WHITE PLASTIC SWIVEL HEAD ASSEMBLIES, EACH HEAD ASSEMBLY CONSISTS OF: ONE CIRCUIT BOARD WITH 12 LEDS, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH AND 1 APERTURE PER LED, CLEAR PRISMATIC PLASTIC LENS. BOTH SWIVEL HEAD ASSEMBLIES WERE ILLUMINATED FOR THIS TEST. ONLY ONE LIGHT HEAD WAS MEASURED FOR LIGHT OUTPUT. LENS PRISMS IN.

**LAMPS:** TWELVE WHITE LIGHT EMITTING DIODES (LEDS) EACH WITH CLEAR HEMISPHERICAL INTEGRAL LENS, VERTICAL BASE-UP POSITION.

**INPUT ELECTRICAL:** 3.60 VOLTS, 1.53 WATTS, 0.424 AMPS

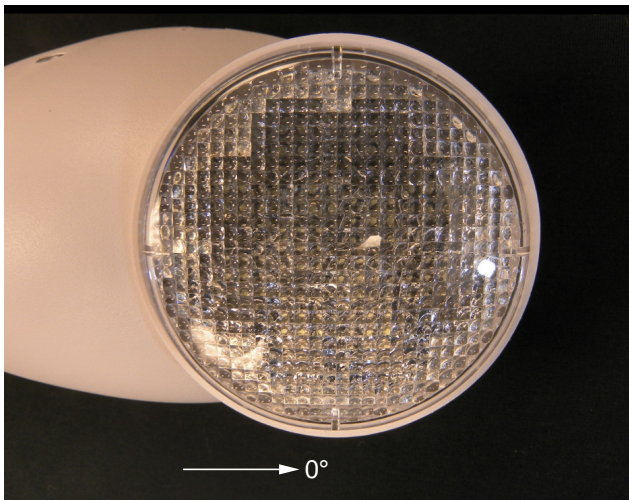
**MOUNTING:** SURFACE

**LED DRIVER:** PACE ELECTRONICS PROPRIETARY

**NOTE:** DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT CLIENT REQUESTED INPUT VOLTAGE (3.6VDC) TO THE DRIVER. DRIVER INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET



THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

Approved           *R BERGIN*

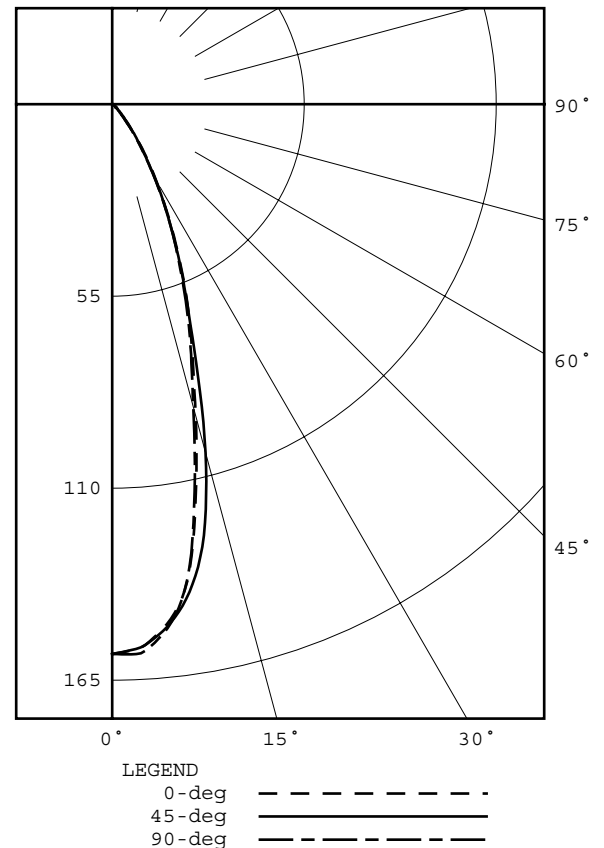
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CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	157.5	157.5	157.5	157.5	157.5	
5	152.1	152.4	152.6	153.2	153.6	14.0
15	92.3	96.1	103.2	94.2	89.8	26.5
25	41.9	42.4	41.2	41.0	41.0	19.1
35	13.2	12.9	12.7	12.3	12.2	8.3
45	2.6	2.5	2.9	2.5	2.5	2.2
55	1.1	1.1	1.1	1.1	1.1	1.0
65	0.5	0.4	0.5	0.4	0.5	0.5
75	0.2	0.2	0.2	0.2	0.2	0.3
85	0.1	0.1	0.1	0.1	0.1	0.1
90	0.1	0.1	0.1	0.1	0.1	0.1
95	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
115	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
135	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
155	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
175	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

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	59.7	82.7
0- 40	68.0	94.2
0- 60	71.2	98.6
0- 90	72.2	100.0
90-120	0.0	0.0
90-130	0.0	0.0
90-150	0.0	0.0
90-180	0.0	0.0
0-180	72.2	100.0

EFFICACY = 47.2 lm/W  
CIE TYPE - DIRECT  
PLANE : 0-DEG 90-DEG  
SPACING CRITERIA : 0.56 0.55  
BEAM ANGLE (50%) : 34.3 X 33.7 DEGREES  
FIELD ANGLE (10%) : 67.7 X 66.5 DEGREES





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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	157.5	157.5	157.5	157.5	157.5
5.0	152.1	152.4	152.6	153.2	153.6
10.0	131.2	134.7	137.2	133.4	130.5
15.0	92.3	96.1	103.2	94.2	89.8
20.0	64.1	64.0	64.4	62.7	62.6
25.0	41.9	42.4	41.2	41.0	41.0
30.0	24.9	24.8	24.3	24.5	24.2
35.0	13.2	12.9	12.7	12.3	12.2
40.0	5.1	5.6	6.3	5.5	5.2
45.0	2.6	2.5	2.9	2.5	2.5
50.0	1.5	1.5	1.6	1.6	1.6
55.0	1.1	1.1	1.1	1.1	1.1
60.0	0.8	0.8	0.8	0.8	0.8
65.0	0.5	0.4	0.5	0.4	0.5
70.0	0.3	0.4	0.4	0.4	0.3
75.0	0.2	0.2	0.2	0.2	0.2
80.0	0.2	0.2	0.2	0.2	0.2
85.0	0.1	0.1	0.1	0.1	0.1
90.0	0.1	0.1	0.1	0.1	0.1
95.0	0.0	0.0	0.0	0.0	0.0
100.0	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0
110.0	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0
130.0	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0
140.0	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0
160.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0



INDEPENDENT TESTING LABORATORIES, INC.  
 4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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5-DEGREE  
 ZONAL LUMEN SUMMARY

0- 5	3.7
5- 10	10.3
10- 15	13.6
15- 20	12.9
20- 25	10.9
25- 30	8.2
30- 35	5.4
35- 40	2.9
40- 45	1.4
45- 50	0.8
50- 55	0.6
55- 60	0.4
60- 65	0.3
65- 70	0.2
70- 75	0.2
75- 80	0.1
80- 85	0.1
85- 90	0.1
90- 95	0.0
95-100	0.0
100-105	0.0
105-110	0.0
110-115	0.0
115-120	0.0
120-125	0.0
125-130	0.0
130-135	0.0
135-140	0.0
140-145	0.0
145-150	0.0
150-155	0.0
155-160	0.0
160-165	0.0
165-170	0.0
170-175	0.0
175-180	0.0

10-DEGREE  
 ZONAL LUMEN SUMMARY

0- 10	14.0
0- 20	40.6
0- 30	59.7
0- 40	68.0
0- 50	70.2
0- 60	71.2
0- 70	71.8
0- 80	72.0
0- 90	72.2
0-100	72.2
0-110	72.2
0-120	72.2
0-130	72.2
0-140	72.2
0-150	72.2
0-160	72.2
0-170	72.2
0-180	72.2



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100
1	114	111	110	109	107	112	109	107	105	105	104	102	101	100	99	98	97	96	94
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89	89
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84	84
4	100	93	88	84	98	92	88	84	90	86	83	88	85	82	86	83	81	80	80
5	96	88	83	79	94	87	83	79	86	82	78	84	80	78	83	79	77	76	76
6	92	84	79	75	90	83	78	75	82	77	74	80	77	74	79	76	73	72	72
7	88	80	75	71	87	79	74	71	78	74	70	77	73	70	76	72	70	69	69
8	85	76	71	68	84	76	71	67	75	70	67	74	70	67	73	69	67	65	65
9	82	73	68	64	81	73	68	64	72	67	64	71	67	64	70	66	64	63	63
10	79	70	65	62	78	70	65	62	69	64	61	68	64	61	67	64	61	60	60

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 TEST SAMPLE.

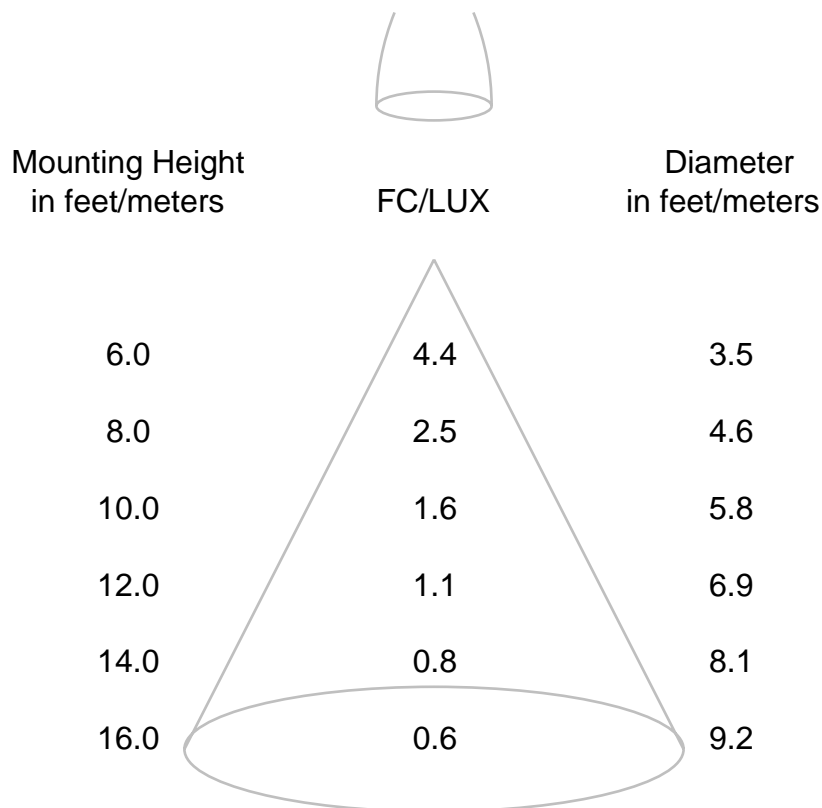
NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.

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## CONE OF LIGHT DIAGRAM

(diameter shown is where fc/lux value is half the fc/lux at nadir)



If distances are feet, results are footcandles.  
 If distances are meters, results are lux.

Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.