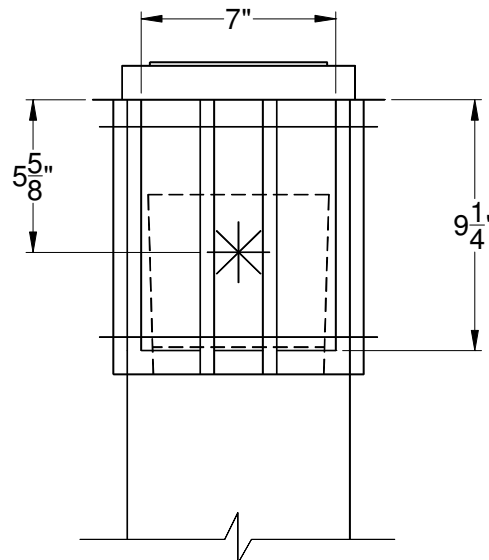




INDEPENDENT TEST LABORATORY REPORT No. 29116

PACE ILLUMINATION - OUTDOOR LUMINAIRE, CAT# PAMPAS TPBM POST TOP
WITH GLASS REFRACTOR INSIDE AND WHITE FLAT PLASTIC LENSES ON FOUR SIDES
ONE SYLVANIA 70 WATT MH LAMP, CAT# MP70/U/MED. LUMEN RATING = 5200 LMS.
LAMP OPERATING AT 70 WATTS

IESNA CUTOFF CLASSIFICATION: SEMICUTOFF



PREPARED FOR:

PACE ILLUMINATION
OAK LAWN, IL

DATE: JUN 17, 2011

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST FACTORS HAVE NOT BEEN APPLIED

TESTED IN 30 PLANES LEFT SIDE, 30 PLANES RIGHT SIDE, LEFT AND RIGHT AVERAGED

VERTICAL TEST INCREMENTS ARE 2.5 DEGREES.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.

CERTIFIED BY:

Ryder Turney

LIGHTING SCIENCES, INC.
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UTILIZATION TABLE

CO-EFFICIENT OF UTILIZATION

RATIO	HOUSE SIDE	STREET SIDE	TOTAL
0.5	0.014	0.014	0.029
1.0	0.030	0.029	0.059
1.5	0.042	0.041	0.083
2.0	0.051	0.050	0.101
2.5	0.057	0.056	0.113
3.0	0.062	0.060	0.122
3.5	0.066	0.064	0.130
4.0	0.068	0.066	0.134
5.0	0.072	0.070	0.142
TOTAL:	0.089	0.087	0.176

PERCENTAGE OUTPUTS

DOWNWARD:	STREET SIDE =	8.7%
	HOUSE SIDE =	8.9%
	TOTAL =	17.6%
UPWARD:	STREET SIDE =	8.8%
	HOUSE SIDE =	9.0%
	TOTAL =	17.9%
TOTAL EFFICIENCY	=	35.4%

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PAGE ILLUMINATION - OUTDOOR LUMINAIRE, CAT# PAMPAS TPBM POST TOP
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LAMP OPERATING AT 70 WATTS

ZONAL LUMEN SUMMARY PER IES PUBLICATION TM-15-07

FORWARD LIGHT:

LUMINAIRE LUMENS	451.1
% LAMP LUMENS	8.7 %
FORWARD LOW ZONE (0 TO 30 DEGREES)	0.2 %
FORWARD MID ZONE (30 TO 60 DEGREES)	2.5 %
FORWARD HIGH ZONE (60 TO 80 DEGREES)	3.7 %
FORWARD VERY HIGH ZONE (80 TO 90 DEGREES)	2.2 %

BACK LIGHT:

LUMINAIRE LUMENS	461.6
% LAMP LUMENS	8.9 %
BACK LIGHT LOW ZONE (0 TO 30 DEGREES)	0.2 %
BACK LIGHT MID ZONE (30 TO 60 DEGREES)	2.6 %
BACK LIGHT HIGH ZONE (60 TO 80 DEGREES)	3.8 %
BACK LIGHT VERY HIGH ZONE (80 TO 90 DEGREES)	2.3 %

UPLIGHT:

LUMINAIRE LUMENS	930.1
% LAMP LUMENS	17.9 %
UPLIGHT LOW ZONE (90 TO 100 DEGREES)	4.5 %
UPLIGHT HIGH ZONE (100 TO 180 DEGREES)	13.4 %

TRAPPED LIGHT:

LUMINAIRE LUMENS	3357.2
% LAMP LUMENS	64.6 %

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LAMP OPERATING AT 70 WATTS

IES "BUG" RATING (BACK LIGHT, UPLIGHT, GLARE)
PER ADDENDUM TO IES TM-15-07

	LUMENS	% LAMP LUMENS
BACK LIGHT		
BH (60-80 DEGREES)	196.2	B1
BM (30-60 DEGREES)	135.0	B0
BL (0-30 DEGREES)	11.1	B0
UPLIGHT		
UH (100-180 DEGREES)	694.9	U4
UL (90-100 DEGREES)	235.3	U3
FVH (80-90 DEGREES)	116.8	U2
BVH (80-90 DEGREES)	119.2	U2
GLARE LIGHT		
FVH (80-90 DEGREES)	116.8	G1
BVH (80-90 DEGREES)	119.2	G1
FH (60-80 DEGREES)	191.5	G0
BH (60-80 DEGREES)	196.2	G0

IES BUG RATING: B1 U4 G1

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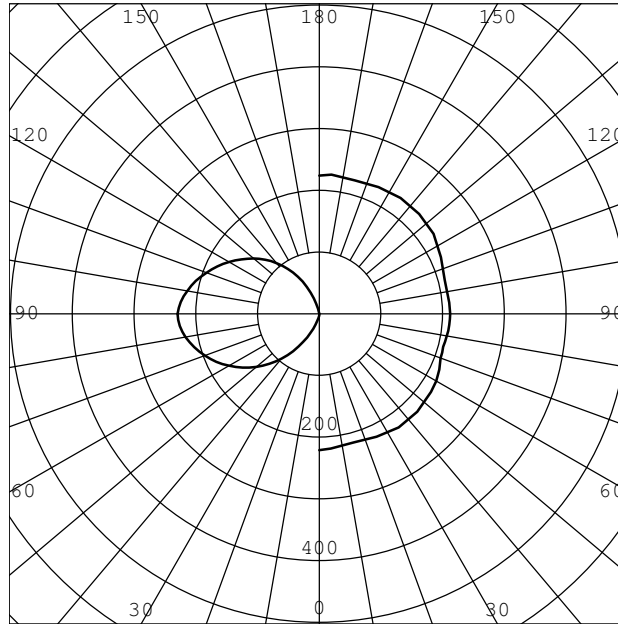
INDEPENDENT TEST LABORATORY REPORT No. 29116

FACE ILLUMINATION - OUTDOOR LUMINAIRE, CAT# PAMPAS TPBM POST TOP
WITH GLASS REFRACTOR INSIDE AND WHITE FLAT PLASTIC LENSES ON FOUR SIDES
ONE SYLVANIA 70 WATT MH LAMP, CAT# MP70/U/MED. LUMEN RATING = 5200 LMS.
LAMP OPERATING AT 70 WATTS

INTENSITY (CANDLEPOWER)
IN MAX. PLANE

INTENSITY (CANDLEPOWER)
IN MAX. CONE

ANGLE	CANDLEPOWER
0.0	0
5.0	0
10.0	2
15.0	8
20.0	19
25.0	34
30.0	53
35.0	74
40.0	95
45.0	115
50.0	134
52.5	143
55.0	152
57.5	161
60.0	169
62.5	177
65.0	184
67.5	191
70.0	198
72.5	204
75.0	210
77.5	215
80.0	220
82.5	224
85.0	227
87.5	229
90.0	229
95.0	225
105.0	207
115.0	182
125.0	154
135.0	124
145.0	89
155.0	89
165.0	48
175.0	9
180.0	0



ANGLE	CANDLEPOWER
0.0	220
5.0	219
15.0	216
25.0	220
35.0	225
45.0	225
55.0	221
60.0	218
62.5	216
65.0	214
67.5	212
70.0	209
72.5	208
75.0	208
77.5	209
80.0	210
82.5	210
85.0	211
87.5	212
90.0	212
95.0	211
105.0	210
115.0	217
125.0	225
135.0	229
145.0	229
155.0	226
165.0	223
175.0	226
180.0	223

MAXIMUM INTENSITY (CANDLEPOWER) : 229 CD
 PLANE OF MAXIMUM: 145.0
 VERTICAL ANGLE OF MAXIMUM: 90.0

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INDEPENDENT TEST LABORATORY REPORT No. 29116

PACE ILLUMINATION - OUTDOOR LUMINAIRE, CAT# PAMPAS TPBM POST TOP
 WITH GLASS REFRACTER INSIDE AND WHITE FLAT PLASTIC LENSES ON FOUR SIDES
 ONE SYLVANIA 70 WATT MH LAMP, CAT# MP70/U/MED. LUMEN RATING = 5200 LMS.
 LAMP OPERATING AT 70 WATTS

INTENSITY (CANDLEPOWER) SUMMARY

VERT. ANGLE	HORIZONTAL ANGLES - STREET SIDE									
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0
0.0	0	0	0	0	0	0	0	0	0	0
5.0	0	0	0	0	0	0	0	0	0	0
10.0	3	3	2	2	2	2	2	2	3	3
15.0	12	11	11	10	8	7	8	9	10	11
20.0	27	26	25	22	19	18	18	20	23	25
25.0	45	44	42	38	35	34	34	35	39	42
30.0	63	63	60	56	53	52	52	53	56	60
35.0	81	81	77	74	72	72	71	71	74	78
40.0	99	99	95	92	92	92	91	90	91	96
45.0	116	116	111	109	111	112	110	107	108	112
50.0	132	132	128	126	129	130	128	124	124	128
55.0	148	148	144	144	147	147	145	141	139	144
60.0	163	163	159	159	163	164	161	157	154	158
65.0	178	177	173	174	178	179	176	171	167	171
70.0	190	190	186	188	192	192	189	184	179	184
75.0	202	202	198	200	204	205	201	195	190	194
80.0	211	211	207	209	214	215	211	205	199	203
85.0	217	217	213	217	221	222	218	212	205	208
90.0**	220	219	216	220	225	225	221	214	208	211

VERT. ANGLE	HORIZONTAL ANGLES - HOUSE SIDE										
	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
0.0	0	0	0	0	0	0	0	0	0	0	0
5.0	1	0	0	0	0	0	0	0	0	0	0
10.0	3	3	3	3	3	2	2	3	3	3	3
15.0	12	12	11	10	8	8	8	9	11	11	11
20.0	26	26	24	22	19	18	19	21	25	26	26
25.0	43	43	41	37	34	34	34	37	41	44	44
30.0	61	61	58	54	52	52	53	55	60	64	64
35.0	79	79	76	73	72	73	74	75	79	84	85
40.0	97	96	93	91	92	94	95	95	98	103	104
45.0	113	113	109	108	111	114	115	114	116	121	121
50.0	129	128	125	126	130	133	134	132	134	138	139
55.0	145	144	141	143	148	151	152	150	151	155	156
60.0	159	158	155	159	165	168	169	167	166	171	171
65.0	172	172	169	174	180	183	184	182	181	185	184
70.0	184	184	182	187	193	196	198	195	194	198	197
75.0	195	194	193	198	206	209	210	207	205	209	207
80.0	203	203	201	208	216	219	220	217	215	218	216
85.0	209	208	207	214	222	225	227	224	221	224	221
90.0**	212	211	210	217	225	229	229	226	223	226	223

** DENOTES VERTICAL ANGLE OF MAXIMUM CONE

**** DENOTES LATERAL ANGLE OF MAXIMUM PLANE

INTENSITY WAS MEASURED IN 2.5 DEGREE STEPS - TABULATIONS ARE AVAILABLE

LIGHTING SCIENCES, INC.
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INDEPENDENT TEST LABORATORY REPORT No. 29116

** ILLUMINANCE(FOOTCANDLE) TABLE FOR SINGLE LUMINAIRE AT 29.0 FT. **															
LATERAL RATIOS															
-3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.008	.007	.007	.006	.005	.004	.003	.002	.002	.002	.001	.001	.001	.001	
-2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.012	.011	.010	.008	.006	.005	.004	.003	.002	.002	.001	.001	.001	.001	
-2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.019	.018	.015	.012	.009	.006	.005	.003	.003	.002	.001	.001	.001	.001	
-1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.033	.029	.023	.017	.012	.008	.005	.004	.003	.002	.002	.001	.001	.001	
-1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.051	.045	.034	.023	.014	.009	.006	.004	.003	.002	.002	.001	.001	.001	
-0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.043	.048	.043	.027	.017	.010	.007	.005	.003	.002	.002	.001	.001	.001	
HOUSE		CURB LINE													
STREET	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.000	.042	.048	.030	.018	.011	.007	.005	.003	.002	.002	.001	.001	.001	
0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.044	.048	.042	.027	.016	.010	.007	.005	.003	.002	.002	.001	.001	.001	
1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.049	.043	.034	.022	.014	.009	.006	.004	.003	.002	.002	.001	.001	.001	
1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.031	.028	.023	.016	.011	.008	.005	.004	.003	.002	.002	.001	.001	.001	
2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.018	.017	.014	.011	.009	.006	.005	.003	.002	.002	.001	.001	.001	.001	
2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.011	.011	.009	.008	.006	.005	.004	.003	.002	.002	.001	.001	.001	.001	
3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.007	.007	.006	.005	.005	.004	.003	.002	.002	.002	.001	.001	.001	.001	
3.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.005	.005	.004	.004	.003	.003	.002	.002	.002	.002	.001	.001	.001	.001	
4.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.003	.003	.003	.003	.003	.002	.002	.002	.001	.001	.001	.001	.001	.000	
4.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.003	.002	.002	.002	.002	.002	.002	.001	.001	.001	.001	.001	.001	.000	
5.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.002	.002	.002	.002	.002	.001	.001	.001	.001	.001	.001	.001	.001	.000	
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
	LONGITUDINAL MOUNTING HEIGHT RATIOS														

CORRECTION FACTORS FOR OTHER MOUNTING HEIGHTS: SEE ISOFOOTCANDLE PAGE

ISOFOOTCANDLE

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MOUNTING HEIGHT FOR ISOFC 29.0 FEET

