



REPORT NUMBER: ITL82265
ISSUE DATE: 08/12/14
PREPARED FOR: OXYGEN LIGHTING
CATALOG NUMBER: 3-593-XX

PAGE: 1 OF 6
REVISED: 04/04/16

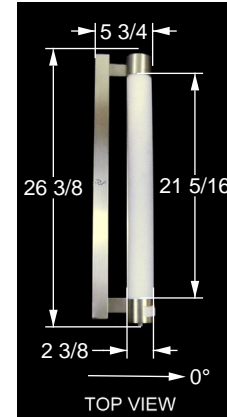
LUMINAIRE: FABRICATED SEMI-SPECULAR METAL DRIVER HOUSING, FORMED SEMI-SPECULAR METAL CIRCUIT BOARD MOUNTING STRIP, 2 WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, FROSTED TRANSLUCENT WHITE CYLINDRICAL ACRYLIC DIFFUSER WITH FABRICATED SEMI-SPECULAR METAL END CAPS. DIFFUSER FROSTED SIDE OUT.

LAMPS: SEVENTY-TWO WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDs), AIMED AT THE HORIZON.
TOTAL INPUT WATTS = 24.1 AT 120.0 VOLTS
MOUNTING: WALL

LED DRIVERS: TWO ESPEN VEL12030MVH-1

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVERS. ACRYLIC MATERIAL INFORMATION PROVIDED BY CLIENT.

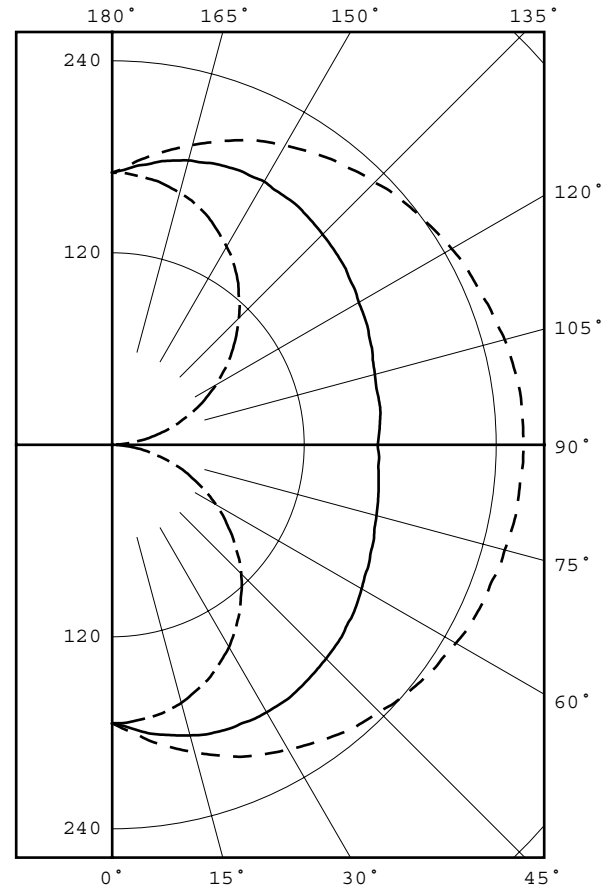
TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 20.0 FEET



CANDELA DISTRIBUTION

	0.0	45.0	90.0	135.0	180.0	
0	174	174	174	174	174	
5	182	179	173	166	164	16
15	199	188	167	150	145	48
25	214	192	154	131	126	75
35	226	193	136	110	106	95
45	236	189	114	89	88	107
55	245	184	88	68	70	111
65	251	177	61	49	53	109
75	254	171	34	30	31	101
85	256	167	9	7	0	88
90	257	166	0	0	0	
95	257	168	9	3	0	87
105	254	170	35	30	29	100
115	248	176	62	48	52	108
125	241	181	88	67	68	110
135	232	186	112	87	86	105
145	222	189	134	108	104	93
155	210	189	151	128	123	73
165	194	184	163	147	141	47
175	178	175	169	163	160	16
180	170	170	170	170	170	

FLUX



LEGEND:
0-deg - - - - -
45-deg - - - - -
90-deg - - - - -

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	139	9.3
0- 40	234	15.7
0- 60	452	30.4
0- 90	750	50.3
90-120	295	19.8
90-130	405	27.2
90-150	603	40.5
90-180	740	49.7
0-180	1489	100.0

EFFICACY = 61.8 lm/W
CIE TYPE - GENERAL DIFFUSE
PLANE : 0-DEG 90-DEG 180-DEG
SPACING CRITERIA : 1.94 1.25 1.01

Checked N. WHITE
Approved R. BEATTIE
Lighting Engineer



itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL82265
ISSUE DATE: 08/12/14
PREPARED FOR: OXYGEN LIGHTING

PAGE: 2 OF 6
REVISED: 04/04/16

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	6863.	6341.	4908.
55	7125.	6571.	4655.
65	7299.	6691.	4357.
75	7387.	6796.	3904.
85	7445.	6812.	2906.



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

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL82265
ISSUE DATE: 08/12/14
PREPARED FOR: OXYGEN LIGHTING

PAGE: 3 OF 6
REVISED: 04/04/16

CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	174	174	174	174	174	174	174	174	174
5.0	182	182	179	176	173	169	166	164	164
10.0	191	189	184	178	171	164	158	156	154
15.0	199	197	188	178	167	157	150	146	145
20.0	207	203	191	176	161	149	140	137	135
25.0	214	208	192	172	154	139	131	127	126
30.0	220	213	193	168	146	129	121	117	116
35.0	226	217	193	162	136	119	110	107	106
40.0	232	221	191	156	125	107	99	97	97
45.0	236	223	189	148	114	95	89	88	88
50.0	241	226	187	139	101	83	78	78	79
55.0	245	228	184	130	88	71	68	69	70
60.0	248	229	180	120	75	59	58	61	62
65.0	251	230	177	111	61	47	49	52	53
70.0	252	231	174	102	48	37	40	43	43
75.0	254	231	171	93	34	27	30	32	31
80.0	256	232	169	86	21	18	19	19	19
85.0	256	232	167	82	9	9	7	0	0
90.0	257	231	166	80	0	0	0	0	0
95.0	257	232	168	82	9	9	3	0	0
100.0	256	232	169	86	22	18	18	16	15
105.0	254	231	170	93	35	27	30	30	29
110.0	251	229	173	101	48	37	40	42	42
115.0	248	228	176	110	62	47	48	51	52
120.0	245	226	178	119	75	58	57	59	60
125.0	241	224	181	129	88	70	67	67	68
130.0	237	222	184	137	100	82	77	76	77
135.0	232	220	186	146	112	94	87	85	86
140.0	227	217	188	153	123	105	98	95	95
145.0	222	213	189	160	134	116	108	104	104
150.0	216	209	190	165	143	127	118	114	113
155.0	210	204	189	169	151	137	128	124	123
160.0	202	198	187	172	158	146	138	133	132
165.0	194	192	184	173	163	154	147	143	141
170.0	186	185	180	174	167	160	155	152	151
175.0	178	177	175	172	169	166	163	161	160
180.0	170	170	170	170	170	170	170	170	170



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

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL82265
ISSUE DATE: 08/12/14
PREPARED FOR: OXYGEN LIGHTING

PAGE: 4 OF 6
REVISED: 04/04/16

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	4
5- 10	12
10- 15	20
15- 20	28
20- 25	34
25- 30	40
30- 35	45
35- 40	49
40- 45	53
45- 50	55
50- 55	56
55- 60	56
60- 65	55
65- 70	54
70- 75	52
75- 80	49
80- 85	46
85- 90	42
90- 95	42
95-100	45
100-105	49
105-110	51
110-115	53
115-120	55
120-125	55
125-130	55
130-135	54
135-140	52
140-145	49
145-150	44
150-155	40
155-160	34
160-165	27
165-170	20
170-175	12
175-180	4

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	16
0- 20	64
0- 30	139
0- 40	234
0- 50	341
0- 60	452
0- 70	561
0- 80	662
0- 90	750
0-100	837
0-110	937
0-120	1045
0-130	1155
0-140	1260
0-150	1353
0-160	1426
0-170	1473
0-180	1489



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

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL82265

PAGE: 5 OF 6

ISSUE DATE: 08/12/14

REVISED: 04/04/16

PREPARED FOR: OXYGEN LIGHTING

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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50	
1	95	90	85	80	87	82	78	74	69	66	63	57	54	52	46	44	42	37	
2	86	77	69	63	78	71	64	59	59	54	50	48	45	42	39	36	34	29	
3	77	67	58	52	71	61	54	48	51	46	41	42	38	34	33	30	27	23	
4	70	58	50	43	64	54	46	40	45	39	34	37	32	28	29	26	23	19	
5	64	52	43	36	59	48	40	34	40	34	29	33	28	24	26	23	20	16	
6	59	46	37	31	54	43	35	29	36	30	25	29	25	21	24	20	17	14	
7	55	41	33	27	50	38	31	25	32	26	22	27	22	18	21	18	15	12	
8	51	38	29	24	46	35	27	22	29	23	19	24	20	16	20	16	13	11	
9	47	34	26	21	43	32	24	20	27	21	17	22	18	14	18	14	12	10	
10	44	31	24	19	40	29	22	17	25	19	15	21	16	13	17	13	11	9	

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.



itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL82265
ISSUE DATE: 08/12/14
PREPARED FOR: OXYGEN LIGHTING

PAGE: 6 OF 6
REVISED: 04/04/16

ADDRESS: 201 RAILHEAD ROAD
FORT WORTH, TX 76106

THIS ITL 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.