



8165 E Kaiser Blvd. Anaheim, CA 92808  
www.lightlaboratory.com

Report No: L121706426



**Report No:** L121706426 **Issue Date:** 1/10/2018

**Report Prepared For:** Number Eight Lighting Company  
526 Portal Street, Cotati, CA 94931

**Model Number:** 804/J2-HI-15/DIM1-8-1400 with FR-P-1-WH trim (35° Aiming Angle)

**Test:** Photometric/Electrical Test

**Standards Used:** Appropriate part or all test guidelines were used for test performed:  
*IESNA LM79: 2008* Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products  
*ANSI NEMA ANSLG C78.377: 2008* Specification of the Chromaticity of Solid State Lighting Products  
*ANSI C82.77:2002:* Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

**Description of Sample:** Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 1/2/18

**Date of Tests:** 1/6/18 - 1/10/18

**Seasoning of Sample:** No seasoning was performed in accordance with IESNA LM-79.

**Equipment List**

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	1/9/19
BK PRECISION	1747	PS-DC04	1/10/19
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/19
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

**Test Summary**

<b>Manufacturer:</b>	Number Eight Lighting Company
<b>Model Number:</b>	804/J2-HI-15/DIM1-8-1400 with FR-P-1-WH trim (35° Aiming Angle)
<b>Driver Model Number:</b>	IntuitiveSystems ISD-701-1400-20-D
<b>Total Lumens:</b>	964.59
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.17
<b>Input Power (W):</b>	20.48
<b>Input Power Factor:</b>	0.99
<b>Current ATHD @ 120V(%):</b>	8%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	47
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:40
<b>Total Operating Time (Hours):</b>	1:15

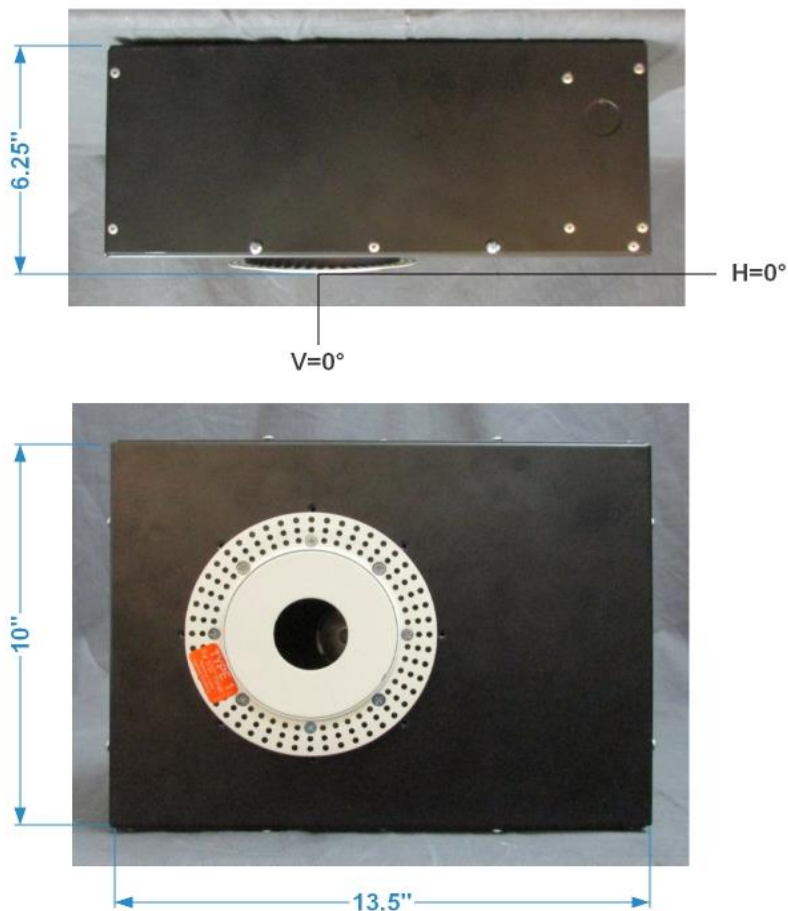


FIG. 1 LUMINAIRE

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

## Test Methods

### Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by :                     Joseph Shin                    

Test Report Released by:



Jeff Ahn  
Engineering Manager

Test Report Reviewed by:



Steve Kang  
Quality Assurance

*\*Attached are photometric data reports. Total number of pages: 10*



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# Photometric Test Report

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121706426.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L121706426  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 1/10/2018  
[MANUFAC] Number Eight Lighting Company  
[LUMCAT] 804/J2-HI-15/DIM1-8-1400 with FR-P-1-WH trim (35° Aiming Angle)  
[LUMINAIRE] LED Recessed Downlight, 15° Beam Spread, 35° Aiming Angle,  
[MORE] 1.75" Dia. Aperture Trim  
[BALLASTCAT] IntuitiveSystems ISD-701-1400-20-D  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[INPUT] 120VAC, 20.48W  
[TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	965
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	47
Total Luminaire Watts	20.48
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.14
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	1.54
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.15 ft (Diameter)
Luminous Width (90-270)	0.15 ft (Diameter)
Luminous Height	0.00 ft

## LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	861
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
<b>0</b>	29	29	29	29	29	29	29	29	29	29
<b>5</b>	8	8	8	8	8	9	9	10	10	11
<b>10</b>	2	2	2	2	3	3	3	4	4	5
<b>15</b>	1	1	1	1	1	1	1	2	2	2
<b>17</b>	1	1	1	1	1	1	1	1	1	1
<b>19</b>	1	0	0	0	1	0	1	1	1	1
<b>21</b>	0	0	0	0	0	0	0	0	1	1
<b>23</b>	0	0	0	0	0	0	0	0	0	1
<b>25</b>	0	0	0	0	0	0	0	0	0	0
<b>27</b>	0	0	0	0	0	0	0	0	0	1
<b>29</b>	0	0	0	0	0	0	0	0	0	0
<b>31</b>	0	0	0	0	0	0	0	0	0	0
<b>33</b>	0	0	0	0	0	0	0	0	0	0
<b>34</b>	0	0	0	0	0	0	0	0	0	0
<b>35</b>	0	0	0	0	0	0	0	0	0	0
<b>36</b>	0	0	0	0	0	0	0	0	0	0
<b>37</b>	0	0	0	0	0	0	0	0	0	0
<b>39</b>	0	0	0	0	0	0	0	0	0	0
<b>41</b>	0	0	0	0	0	0	0	0	0	0
<b>43</b>	0	0	0	0	0	0	0	0	0	0
<b>45</b>	0	0	0	0	0	0	0	0	0	0
<b>47</b>	0	0	0	0	0	0	0	0	0	0
<b>49</b>	0	0	0	0	0	0	0	0	0	0
<b>51</b>	0	0	0	0	0	0	0	0	0	0
<b>53</b>	0	0	0	0	0	0	0	0	0	0
<b>55</b>	0	0	0	0	0	0	0	0	0	0
<b>60</b>	0	0	0	0	0	0	0	0	0	0
<b>65</b>	0	0	0	0	0	0	0	0	0	0
<b>70</b>	0	0	0	0	0	0	0	0	0	0
<b>75</b>	0	0	0	0	0	0	0	0	0	0
<b>80</b>	0	0	0	0	0	0	0	0	0	0
<b>85</b>	0	0	0	0	0	0	0	0	0	0
<b>90</b>	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
<b>0</b>	29	29	29	29	29	29	29	29	29	29
<b>5</b>	12	13	14	15	17	19	21	24	27	31
<b>10</b>	5	6	7	8	10	12	14	17	21	27
<b>15</b>	2	3	3	4	5	7	9	11	14	19
<b>17</b>	2	2	2	3	4	5	7	9	12	17
<b>19</b>	1	2	2	2	3	4	6	8	10	15
<b>21</b>	1	1	1	2	3	3	5	6	8	12
<b>23</b>	1	1	1	2	2	3	4	5	7	10
<b>25</b>	1	1	1	1	2	2	3	4	6	8
<b>27</b>	0	1	1	1	1	2	2	3	5	7
<b>29</b>	1	1	1	1	1	1	2	2	4	6
<b>31</b>	0	1	1	1	1	1	1	2	3	4
<b>33</b>	0	0	1	1	1	1	1	2	2	3
<b>34</b>	0	0	1	1	1	1	1	1	2	3
<b>35</b>	0	0	0	1	1	1	1	1	2	2
<b>36</b>	0	0	0	0	1	1	1	1	2	2
<b>37</b>	0	0	0	0	1	1	1	1	2	2

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121706426.IES**

**CANDELA TABULATION - (Cont.)**

39	0	0	0	0	0	1	1	1	1	2
41	0	0	0	0	0	0	1	1	1	1
43	0	0	0	0	0	0	0	1	1	1
45	0	0	0	0	0	0	0	0	1	1
47	0	0	0	0	0	0	0	0	0	1
49	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0	29	29	29	29	29	29	29	29	29	29
5	35	39	44	49	54	59	64	69	74	78
10	34	43	53	65	80	93	109	126	145	164
15	29	41	57	75	97	125	159	208	268	330
17	24	36	53	74	103	138	185	246	324	407
19	21	32	49	73	105	146	207	291	386	494
21	17	28	45	69	102	149	223	328	457	593
23	15	24	39	66	103	155	240	350	503	667
25	13	20	33	57	94	146	234	375	538	728
27	11	16	28	50	84	139	229	367	631	760
29	8	13	22	41	74	122	210	351	628	770
31	7	10	17	33	66	113	186	324	628	760
33	5	8	14	26	50	96	164	287	617	751
34	4	7	13	23	47	89	152	268	513	724
35	4	7	11	20	39	77	141	259	502	722
36	3	6	10	17	34	72	131	226	403	688
37	3	5	8	15	29	60	120	198	369	671
39	2	3	6	12	22	46	92	169	301	634
41	2	3	4	8	17	34	72	138	236	587
43	1	2	3	6	12	23	49	100	194	350
45	1	1	2	4	8	16	33	78	147	260
47	1	1	2	2	5	11	22	49	102	189
49	0	1	1	2	3	7	15	32	70	135
51	0	0	1	1	2	4	9	20	43	91
53	0	0	1	1	1	3	6	12	26	53
55	0	0	0	1	1	2	3	7	15	32
60	0	0	0	0	0	1	1	2	3	6
65	0	0	0	0	0	0	0	1	1	2
70	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0

**IES INDOOR REPORT  
PHOTOMETRIC FILENAME : L121706426.IES**

**CANDELA TABULATION - (Cont.)**

Vert. Angles	Horizontal Angles						
	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0	29	29	29	29	29	29	29
5	83	87	91	94	97	99	100
10	183	204	222	239	252	259	261
15	394	454	510	562	603	627	636
17	495	587	669	745	814	856	870
19	610	739	867	983	1080	1147	1162
21	746	916	1096	1268	1415	1513	1536
23	863	1093	1340	1601	1824	2006	2071
25	987	1284	1633	2023	2446	2670	2807
27	1048	1409	1908	2475	2827	3616	3816
29	1117	1548	2156	2695	3872	4693	5063
31	1101	1653	2390	2892	4725	5847	6299
33	1103	1596	2374	2942	5148	6588	7212
34	1049	1530	2351	3035	5385	6871	7467
35	1046	1532	2309	2893	5378	6986	7512
36	980	1436	2247	2895	5241	6766	7382
37	961	1418	2145	2831	4895	6477	7060
39	864	1326	1987	2681	4362	5592	6108
41	746	1124	1675	2484	2990	4491	4944
43	689	985	1452	2139	2735	3558	3836
45	607	771	1198	1684	2259	2657	2876
47	341	586	946	1332	1739	2022	2130
49	256	442	723	1028	1313	1498	1566
51	178	317	509	708	904	1049	1096
53	107	195	334	512	656	755	786
55	63	116	199	318	439	524	562
60	12	21	35	53	73	89	95
65	2	4	6	9	12	14	15
70	1	1	2	2	2	3	3
75	0	0	0	0	0	1	1
80	0	0	0	0	0	1	1
85	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L121706426.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	39.88	N.A.	4.10
0-30	214.08	N.A.	22.20
0-40	622.28	N.A.	64.50
0-60	961.24	N.A.	99.70
0-80	964.58	N.A.	100.00
0-90	964.59	N.A.	100.00
10-90	959.79	N.A.	99.50
20-40	582.40	N.A.	60.40
20-50	851.04	N.A.	88.20
40-70	342.18	N.A.	35.50
60-80	3.34	N.A.	0.30
70-80	0.12	N.A.	0.00
80-90	0.01	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	964.59	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	4.80
10-20	35.08
20-30	174.21
30-40	408.19
40-50	268.64
50-60	70.32
60-70	3.21
70-80	0.12
80-90	0.01
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

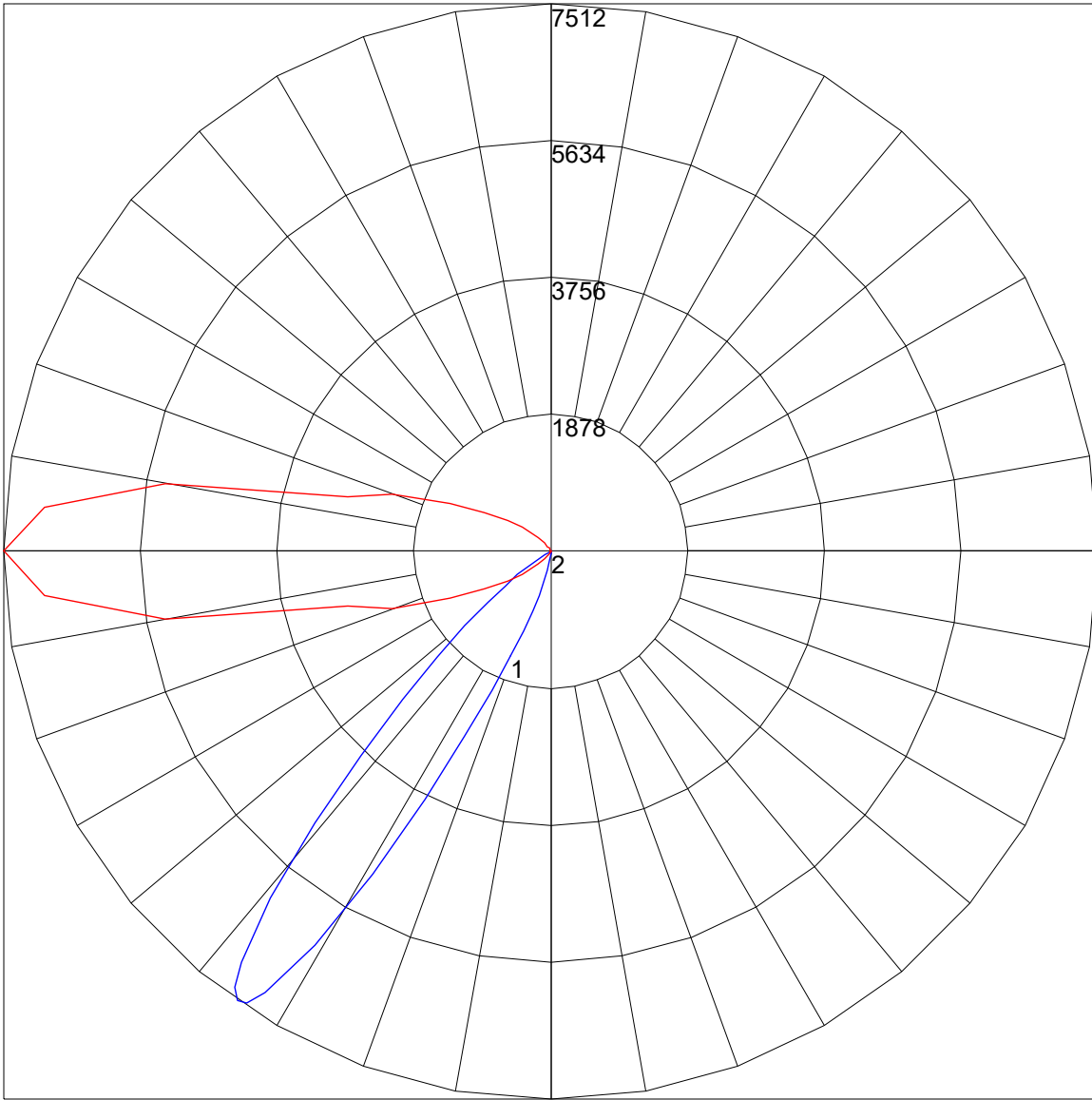


COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	97	92	87	101	95	90	86	92	88	84	89	85	83	86	83	81	79
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	75	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	46
7	69	56	48	43	67	56	48	42	54	47	42	53	47	42	51	46	42	40
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	47	41	36	35
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	33	28	27

POLAR GRAPH



Maximum Candela = 7512 Located At Horizontal Angle = 180, Vertical Angle = 35  
# 1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (35) (Through Max. Cd.)