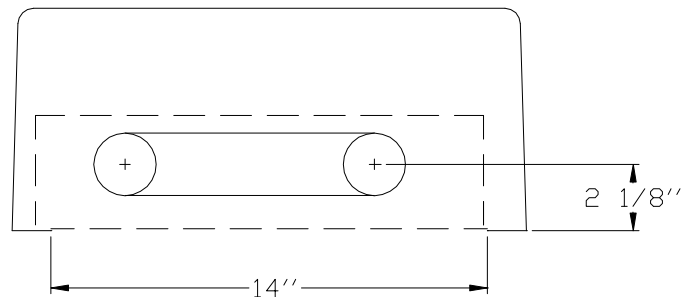




INDEPENDENT TEST LABORATORY REPORT No. 27997

ESCO LIGHTING - FLOOD LIGHT LUMINAIRE, CAT# FLI550  
WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENS  
1 SYLVAINIA 100 WATT IND LAMP, CAT# ICE100/850/2P/E. LUMINAIRE OUTPUT: 6235 Lms.  
ONE SYLVANIA QT1X150ICE/UNV-T BALLAST OPERATING AT 120 VAC AND 148 WATTS

IESNA CUTOFF CLASSIFICATION: CUTOFF



PREPARED FOR:

ESCO LIGHTING INC  
CHICAGO, IL

DATE: NOV 1, 2010

CERTIFIED BY:

*Ryder Tunney*

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.

LIGHTING SCIENCES, INC.  
7826 E. EVANS RD.  
SCOTTSDALE, AZ, USA 85260

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\*\*\* THIS IS AN ABSOLUTE TEST REPORT \*\*\*

UTILIZATION TABLE

CO-EFFICIENT OF UTILIZATION

RATIO	HOUSE SIDE	STREET SIDE	TOTAL
0.5	0.247	0.247	0.494
1.0	0.386	0.395	0.781
1.5	0.444	0.458	0.902
2.0	0.468	0.486	0.953
2.5	0.478	0.498	0.977
3.0	0.482	0.504	0.986
3.5	0.484	0.507	0.991
4.0	0.485	0.509	0.994
5.0	0.487	0.511	0.998
TOTAL:	0.487	0.513	1.000
PERCENT:	48.7	51.3	100.0

EFFICACY (LUMENS PER WATT) 42.1

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS  
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.  
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD  
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

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ZONAL LUMEN SUMMARY PER IES PUBLICATION TM-15-07

\*\*\* THIS IS AN ABSOLUTE TEST REPORT \*\*\*

FORWARD LIGHT:

LUMENS	3195.9
% LUMENS	51.3 %
FORWARD LOW ZONE (0 TO 30 DEGREES)	13.7 %
FORWARD MID ZONE (30 TO 60 DEGREES)	29.3 %
FORWARD HIGH ZONE (60 TO 80 DEGREES)	8.2 %
FORWARD VERY HIGH ZONE (80 TO 90 DEGREES)	0.1 %

BACK LIGHT:

LUMENS	3038.8
% LUMENS	48.7 %
BACK LIGHT LOW ZONE (0 TO 30 DEGREES)	13.7 %
BACK LIGHT MID ZONE (30 TO 60 DEGREES)	28.0 %
BACK LIGHT HIGH ZONE (60 TO 80 DEGREES)	7.0 %
BACK LIGHT VERY HIGH ZONE (80 TO 90 DEGREES)	0.1 %

UPLIGHT:

LUMENS	0.0
% LUMENS	0.0 %
UPLIGHT LOW ZONE (90 TO 100 DEGREES)	0.0 %
UPLIGHT HIGH ZONE (100 TO 180 DEGREES)	0.0 %

TRAPPED LIGHT: NOT APPLICABLE TO AN ABSOLUTE TEST

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

	LUMENS	SECONDARY SOLID ANGLE RATING
BACK LIGHT		
BH (60-80 DEGREES)	434.8	B1
BM (30-60 DEGREES)	1747.3	B2
BL (0-30 DEGREES)	851.8	B2
UPLIGHT		
UH (100-180 DEGREES)	0.0	U0
UL (90-100 DEGREES)	0.0	U0
FVH (80-90 DEGREES)	8.1	U0
BVH (80-90 DEGREES)	4.9	U0
GLARE LIGHT		
FVH (80-90 DEGREES)	8.1	G0
BVH (80-90 DEGREES)	4.9	G0
FH (60-80 DEGREES)	510.5	G0
BH (60-80 DEGREES)	434.8	G0

IES BUG RATING: B2 U0 G0

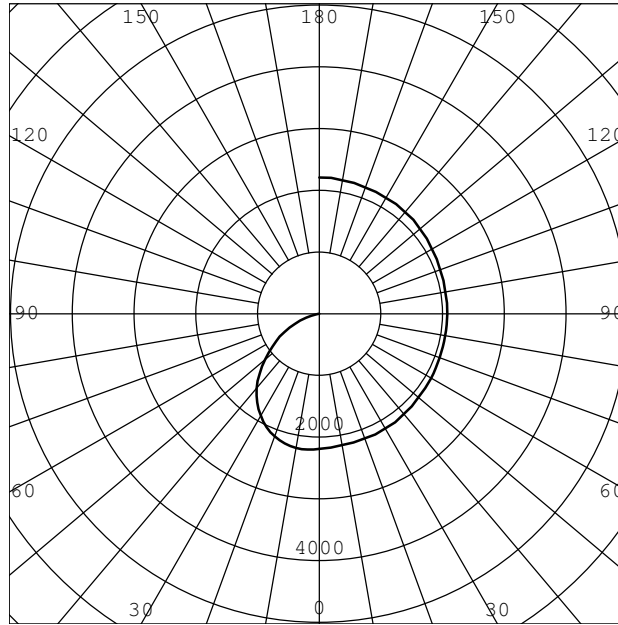
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INTENSITY (CANDLEPOWER)  
 IN MAX. PLANE

ANGLE	CANDLEPOWER
0.0	2188
5.0	2208
10.0	2209
15.0	2178
20.0	2118
25.0	2027
30.0	1906
35.0	1761
40.0	1587
45.0	1370
50.0	1148
52.5	1039
55.0	927
57.5	838
60.0	747
62.5	647
65.0	535
67.5	435
70.0	336
72.5	227
75.0	136
77.5	66
80.0	24
82.5	10
85.0	5
87.5	2
90.0	1



INTENSITY (CANDLEPOWER)  
 IN MAX. CONE

ANGLE	CANDLEPOWER
0.0	2191
5.0	2180
15.0	2163
25.0	2160
35.0	2146
45.0	2123
55.0	2101
60.0	2093
62.5	2090
65.0	2087
67.5	2082
70.0	2080
72.5	2076
75.0	2076
77.5	2074
80.0	2075
82.5	2073
85.0	2075
87.5	2074
90.0	2075
95.0	2081
105.0	2087
115.0	2108
125.0	2130
135.0	2156
145.0	2175
155.0	2185
165.0	2201
175.0	2212
180.0	2212

MAXIMUM INTENSITY (CANDLEPOWER): 2212 CD  
 PLANE OF MAXIMUM: 175.0  
 VERTICAL ANGLE OF MAXIMUM: 7.5

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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	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188
5.0	2189	2180	2170	2163	2161	2156	2150	2144	2137	2135
7.5**	2191	2180	2163	2160	2146	2123	2101	2087	2076	2075
10.0	2191	2177	2162	2148	2110	2069	2049	2035	2025	2025
15.0	2189	2163	2145	2081	2032	2010	1986	1976	1972	1977
20.0	2160	2124	2085	2010	1975	1958	1976	1983	1997	1998
25.0	2115	2073	1995	1938	1925	1955	1985	2008	2022	2028
30.0	2046	1998	1893	1843	1897	1958	1999	2025	2044	2048
35.0	1938	1880	1762	1760	1856	1945	2008	2023	2011	1994
40.0	1788	1722	1607	1663	1783	1905	1945	1916	1883	1863
45.0	1612	1534	1438	1554	1694	1763	1781	1776	1753	1731
50.0	1395	1310	1268	1414	1537	1576	1604	1630	1621	1601
55.0	1135	1060	1089	1239	1333	1395	1434	1450	1419	1384
60.0	903	847	904	1025	1128	1187	1183	1162	1110	1065
65.0	676	642	733	830	894	878	826	786	735	698
70.0	433	440	564	598	572	521	466	436	405	382
75.0	242	253	320	295	246	211	185	170	149	137
80.0	88	81	91	75	56	46	42	39	36	31
85.0	8	7	7	6	6	8	7	7	8	9
90.0	0	1	1	1	0	1	2	2	1	2

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	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188	2188
5.0	2136	2142	2147	2158	2166	2175	2180	2192	2203	2208	2212
7.5**	2075	2081	2087	2108	2130	2156	2175	2185	2201	2212	2212
10.0	2027	2031	2037	2051	2074	2112	2149	2178	2192	2209	2207
15.0	1979	1978	1980	1990	2004	2032	2066	2122	2159	2178	2170
20.0	2000	2000	1998	1992	1982	1972	1983	2026	2091	2118	2109
25.0	2029	2031	2027	2020	1993	1949	1908	1918	1989	2027	2014
30.0	2050	2052	2054	2046	2008	1931	1843	1792	1852	1906	1885
35.0	1993	1998	2022	2040	1999	1895	1780	1676	1695	1761	1726
40.0	1861	1867	1893	1909	1896	1838	1705	1561	1517	1587	1542
45.0	1726	1728	1742	1736	1729	1703	1604	1439	1330	1370	1318
50.0	1596	1596	1592	1569	1550	1527	1448	1292	1153	1148	1097
55.0	1375	1382	1393	1377	1350	1324	1256	1131	988	927	870
60.0	1060	1068	1089	1082	1074	1072	1029	941	850	747	680
65.0	693	700	715	714	717	742	744	712	679	535	466
70.0	375	379	385	374	379	400	426	453	445	336	269
75.0	133	136	140	145	144	150	166	180	180	136	105
80.0	30	29	29	31	32	31	32	34	32	24	16
85.0	7	7	6	5	5	4	5	5	5	5	4
90.0	1	2	1	1	0	1	1	2	0	1	0

\*\* DENOTES VERTICAL ANGLE OF MAXIMUM CONE

\*\*\* DENOTES LATERAL ANGLE OF MAXIMUM PLANE

INTENSITY WAS MEASURED IN 2.5 DEGREE STEPS - TABULATIONS ARE AVAILABLE

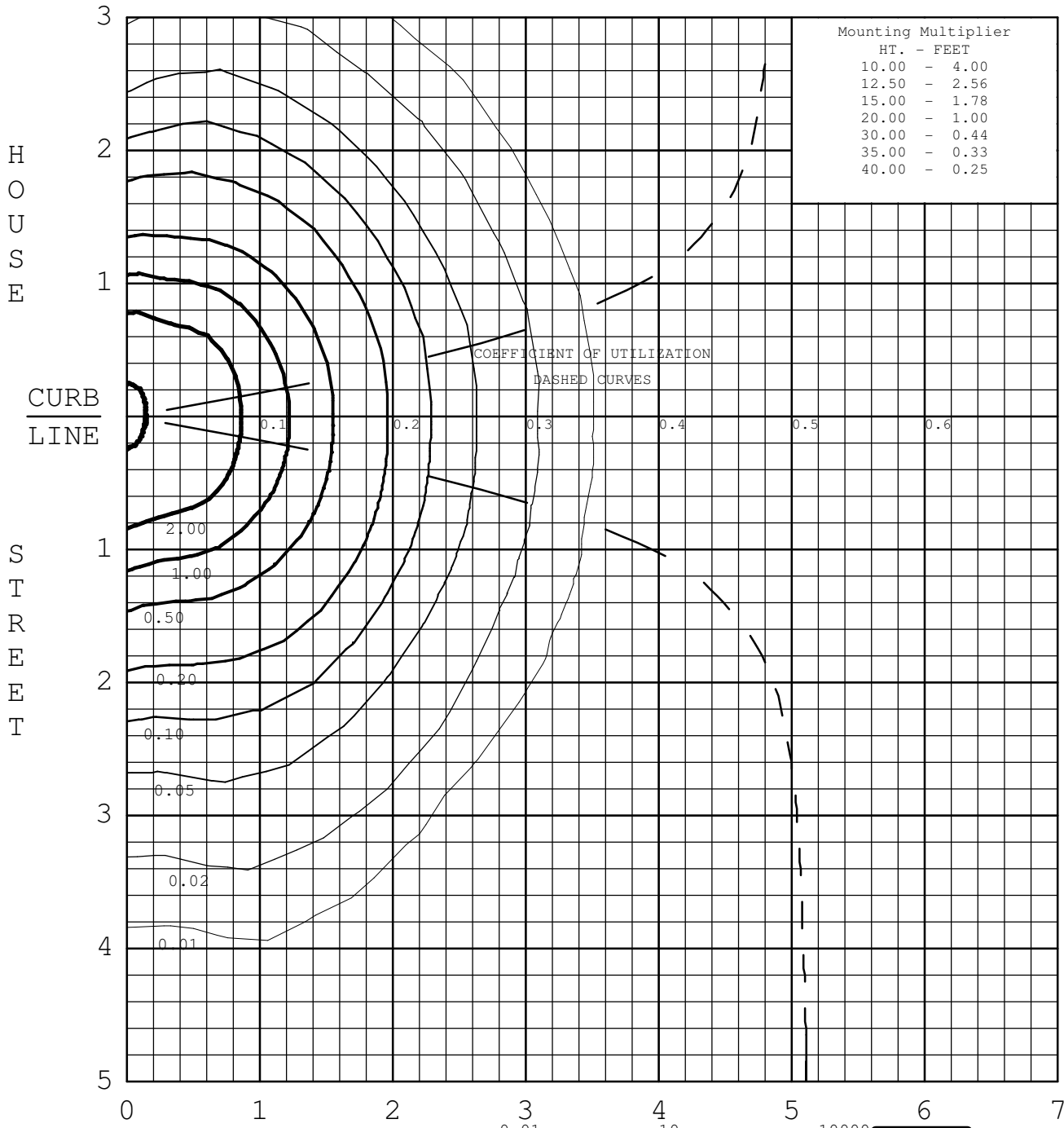
# ISOFOOTCANDLE

CERTIFIED TEST REPORT NO.27997

ESCO LIGHTING - FLOOD LIGHT LUMINAIRE, CAT# FLI550  
 WITH SPECULAR REFLECTOR AND CLEAR FLAT GLASS LENS

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## MOUNTING HEIGHT FOR ISOFC 20.0 FEET



Mounting Multiplier	
HT. - FEET	
10.00	- 4.00
12.50	- 2.56
15.00	- 1.78
20.00	- 1.00
30.00	- 0.44
35.00	- 0.33
40.00	- 0.25

$$\text{RATIO} = \frac{\text{DISTANCE ALONG}}{\text{MOUNTING HEIGHT}}$$

0.01	—————	10	=====	10000
0.02	—————	20	=====	20000
0.05	—————	50	=====	50000
0.1	—————	100	=====	
0.2	—————	200	=====	
0.5	—————	500	=====	
1	—————	1000	=====	
2	—————	2000	=====	
5	—————	5000	=====	

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** ILLUMINANCE(FOOTCANDLE) TABLE FOR SINGLE LUMINAIRE AT 20.0 FT. **															
LATERAL RATIOS															
-3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.017	.022	.021	.015	.009	.005	.003	.002	.001	.001	.000	.000	.000	.000	
-2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.044	.057	.050	.032	.018	.009	.005	.003	.001	.001	.000	.000	.000	.000	
-2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.12	0.14	0.11	.069	.034	.016	.008	.004	.002	.001	.001	.000	.000	.000	
-1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.35	0.36	0.27	0.14	.064	.027	.012	.006	.003	.001	.001	.000	.000	.000	
-1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	1.1	1.0	0.64	0.28	0.11	.042	.017	.007	.003	.002	.001	.000	.000	.000	
-0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	3.5	2.5	1.2	0.47	0.16	.057	.022	.009	.004	.002	.001	.000	.000	.000	
HOUSE		CURB LINE													
STREET	5.4	3.6	1.5	0.55	0.18	.062	.023	.009	.004	.002	.001	.000	.000	.000	
0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	3.7	2.6	1.2	0.49	0.16	.059	.022	.009	.004	.002	.001	.001	.000	.000	
1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	1.4	1.1	0.67	0.31	0.12	.048	.019	.008	.004	.002	.001	.001	.000	.000	
1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.45	0.39	0.30	0.17	.077	.033	.014	.006	.003	.002	.001	.000	.000	.000	
2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	0.16	0.15	0.13	.088	.045	.021	.010	.005	.002	.001	.001	.000	.000	.000	
2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.066	.069	.064	.044	.024	.013	.007	.003	.002	.001	.001	.000	.000	.000	
3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.029	.032	.031	.022	.013	.008	.004	.002	.001	.001	.000	.000	.000	.000	
3.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.014	.015	.016	.012	.008	.005	.003	.002	.001	.001	.000	.000	.000	.000	
4.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.008	.008	.008	.006	.004	.003	.002	.001	.001	.000	.000	.000	.000	.000	
4.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.004	.004	.004	.004	.003	.002	.001	.001	.000	.000	.000	.000	.000	.000	
5.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	.002	.002	.002	.002	.002	.001	.001	.000	.000	.000	.000	.000	.000	.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