

# Report of Test

## LLIA002372-013

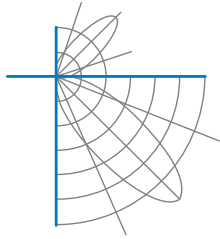
Catalog Number: FL-290PCS-SFYK - 200W Setting - 4000K Setting  
Knuckle or trunion mounted, formed aluminum housing, white plastic reflector, clear glass enclosure, plastic optics over top of LEDs  
960 LEDs, 480 cool white and 480 warm white LEDs  
One LiFud LF-FAC320 LED driver  
120.0Vac, 60.00Hz, 1.644A, 196.7W, 0.997PF, 4.6%THD(i)



### Performance Summary

Total Light Output	31507	lm	Illuminance at 10m	141.6 lux
Luminaire Power	196.7	W	Beam Distance	238.0 Meters (to 0.25 lux)
Luminous Efficacy	160.2	lm/W	Maximum Intensity	14160.1 cd
Beam Spread (50%)	86.9° V x 108.3° H			
Field Spread (10%)	124.5° V x 149.3° H			
NEMA Type	7H x 6V			

**PREPARED FOR : Topaz Lighting, A Southwire Company, 925 Waverly Ave, Holtsville, NY**



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**Floodlight Summary:**

Report data based on absolute values as measured.

Maximum Luminous Intensity 14160.1 cd  
(Luminaire orientation as tested.) 1.1° vertical  
-1.0° horizontal

Beam Spread At 10% of max intensity 124.5° V x 149.3° H  
At 50% of max intensity 86.9° V x 108.3° H  
At 90% of max intensity 49.5° V x 54.6° H

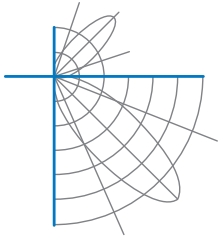
Beam Flux Total 31507 lm  
To 10% of max intensity 30413 lm  
To 50% of max intensity 24342 lm  
To 90% of max intensity 8822 lm

Total Light Output 31506.6 lm

Signed:

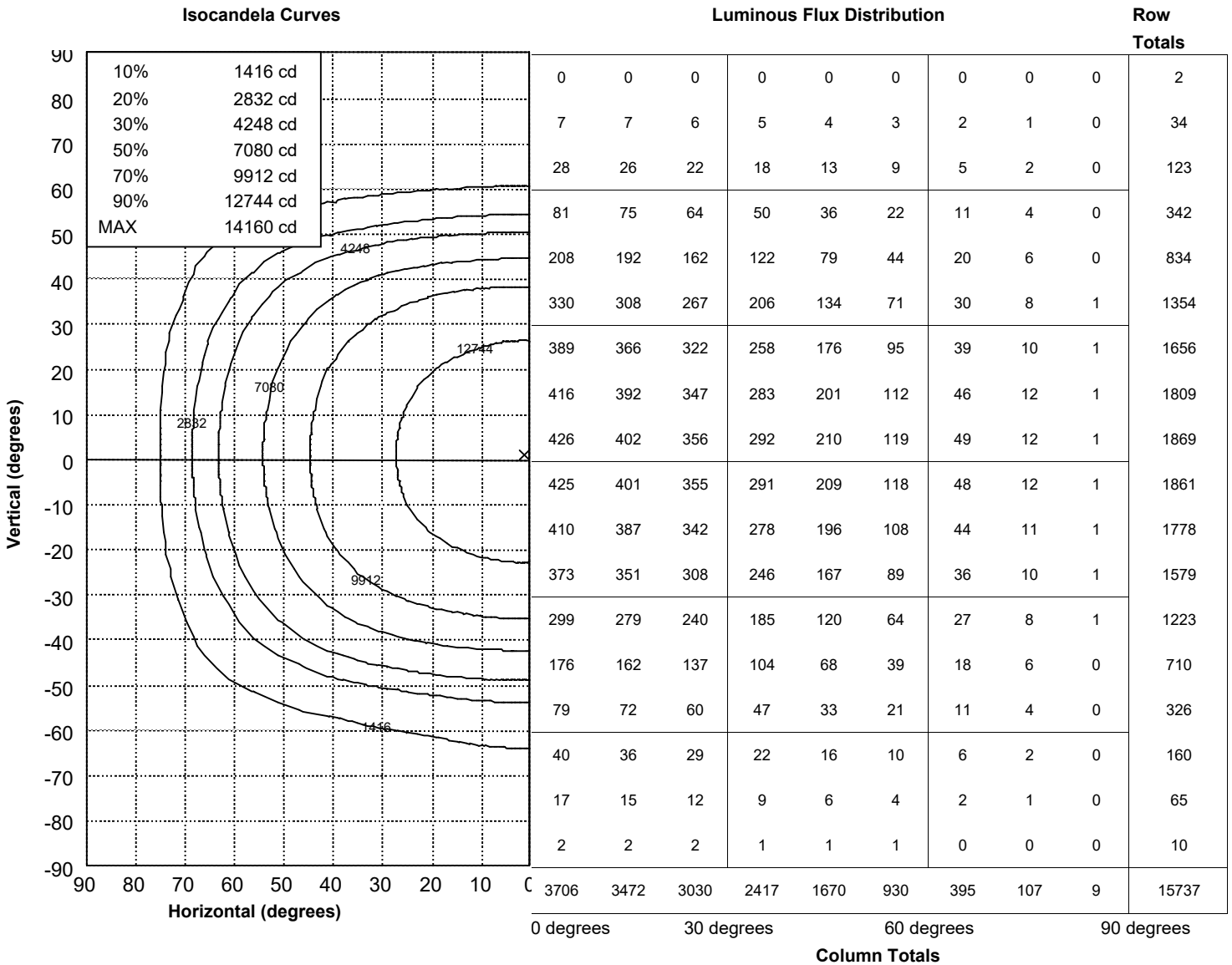
\_\_\_\_\_  
Authorized Signatory

Date of test 8-Jul-2024  
Date of report 8-Jul-2024

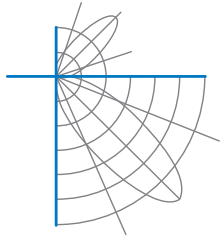


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Note: Left and right sides of photometric data have been averaged.  
Lumen values are tabulated as absolute lumen values.  
Candela values are tabulated as absolute candela values.



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Vertical Angle (degrees)	Left Side Horizontal Angle (degrees)									Lumen Totals
	-90	-60	-30	0	30	60	90	120	150	
-90	10.6 0.0	26.1 0.2	32.8 0.4	40.1 0.8	45.2 1.2	49.1 1.5	60.3 1.9	60.1 2.2	63.7 2.4	10
	30.3 0.1	80.4 0.7	173.4 2.3	237.2 4.1	277.8 6.2	343.0 8.8	412.6 11.7	483.8 14.6	541.6 16.7	65
	49.4 0.2	227.4 2.0	441.1 5.7	561.2 10.1	709.7 15.5	868.8 21.9	1040.1 29.0	1200.1 35.5	1316.6 39.9	160
-60	70.5 0.3	453.5 3.7	792.4 10.6	1175.7 20.8	1524.6 33.2	1833.9 46.7	2143.7 60.5	2387.2 71.9	2540.2 78.7	326
	108.0 0.5	678.7 5.5	1387.9 18.2	2149.1 38.9	3103.0 68.3	4095.8 103.6	4912.0 137.2	5451.1 162.3	5732.7 175.9	710
	140.6 0.7	907.4 7.6	2076.9 27.1	3631.8 64.0	5536.3 119.7	7467.0 185.1	8796.2 240.5	9588.0 279.3	9959.9 299.2	1223
-30	166.5 0.8	1130.1 9.7	2761.0 36.4	5061.6 89.1	7754.4 166.5	9933.3 245.8	11207.3 307.5	11979.9 350.5	12347.4 372.6	1579
	184.8 0.9	1299.9 11.3	3314.6 44.1	6139.5 108.2	9161.4 196.3	11205.4 278.2	12433.4 341.7	13199.7 386.8	13576.5 410.2	1778
	194.4 1.0	1398.6 12.3	3640.7 48.5	6714.7 118.1	9754.9 209.1	11711.8 291.2	12910.3 355.2	13673.5 401.1	14054.4 424.9	1861
0	194.3 1.0	1410.3 12.4	3687.6 49.0	6777.7 119.2	9809.3 210.3	11752.4 292.3	12950.5 356.3	13712.7 402.2	14090.6 426.1	1869
	184.2 0.9	1332.0 11.6	3443.2 45.7	6340.3 111.6	9377.7 201.0	11396.8 283.2	12612.0 346.9	13374.3 392.2	13754.0 415.9	1809
	165.1 0.8	1173.8 10.1	2946.1 38.9	5404.6 95.1	8218.9 176.5	10442.0 258.5	11715.3 321.7	12493.2 365.8	12884.1 388.9	1656
30	138.1 0.7	949.8 8.0	2268.9 29.6	4035.6 71.1	6193.5 133.7	8342.0 206.3	9766.3 266.6	10598.4 308.5	11001.5 330.1	1354
	104.0 0.5	709.3 5.8	1517.0 20.0	2445.9 44.1	3616.5 79.2	4849.7 121.8	5853.5 162.1	6514.6 192.2	6859.9 208.3	834
	64.6 0.2	464.1 3.8	817.4 11.1	1252.5 22.1	1632.6 35.6	1934.1 49.6	2228.5 63.6	2445.5 74.8	2581.5 81.3	342
60	44.3 0.1	213.9 1.9	416.4 5.3	489.1 9.0	599.6 13.3	692.7 17.7	773.0 21.9	848.7 25.7	901.3 28.1	123
	26.9 0.1	59.1 0.5	139.9 1.9	166.2 2.9	169.3 3.8	175.8 4.7	190.9 5.7	213.0 6.6	227.2 7.3	34
	9.3 0.0	18.2 0.1	16.8 0.2	15.1 0.3	14.4 0.4	7.1 0.3	5.1 0.2	1.3 0.0	0.4 0.0	2
90	<p style="text-align: center;">9            107            395            930            1670            2417            3030            3472            3706</p> <p style="text-align: center;"><b>Lumen Totals</b></p>									15737

Standard table of intensity and illuminance in accordance with IES procedures.  
Angular data is shown with the polar axis horizontal.  
Luminous flux expressed as lumens within marked zones.  
Luminous intensity expressed as candelas at centre of zones.

Legend:

candelas
lumens



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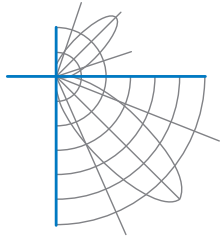
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-90	63.7 2.4	60.1 2.2	60.3 1.9	49.1 1.5	45.2 1.2	40.1 0.8	32.8 0.4	26.1 0.2	10.6 0.0	10
	541.6 16.7	483.8 14.6	412.6 11.7	343.0 8.8	277.8 6.2	237.2 4.1	173.4 2.3	80.4 0.7	30.3 0.1	65
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	0.4 0.0	1.3 0.0	5.1 0.2	7.1 0.3	14.4 0.4	15.1 0.3	16.8 0.2	18.2 0.1	9.3 0.0	2
90	3706	3472	3030	2417	1670	930	395	107	9	15737

**Lumen Totals**

Legend:

candelas
lumens

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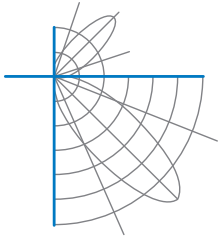
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**Candela trace through origin.**

Vertical Trace			
Angle	Intensity (cd)	Angle	Intensity (cd)
90.0	0.00	0.0	14135.85
87.0	0.00	-3.0	14115.15
84.0	0.00	-6.0	14052.53
81.0	0.50	-9.0	13958.03
78.0	70.81	-12.0	13815.35
75.0	254.21	-15.0	13618.66
72.0	393.64	-18.0	13345.15
69.0	573.66	-21.0	12985.32
66.0	801.80	-24.0	12553.55
63.0	1098.13	-27.0	12035.38
60.0	1489.21	-30.0	11416.64
57.0	2040.70	-33.0	10647.83
54.0	2825.00	-36.0	9696.43
51.0	3939.79	-39.0	8538.85
48.0	5359.73	-42.0	7198.71
45.0	6890.98	-45.0	5730.00
42.0	8498.48	-48.0	4445.04
39.0	9813.31	-51.0	3446.84
36.0	10805.00	-54.0	2715.13
33.0	11566.97	-57.0	2165.28
30.0	12173.54	-60.0	1779.15
27.0	12663.47	-63.0	1499.25
24.0	13057.69	-66.0	1247.21
21.0	13380.86	-69.0	1012.03
18.0	13611.76	-72.0	780.36
15.0	13791.16	-75.0	550.08
12.0	13930.42	-78.0	343.41
9.0	14030.37	-81.0	185.15
6.0	14098.22	-84.0	76.79
3.0	14133.82	-87.0	20.45
0.0	14135.85	-90.0	4.91

Horizontal Trace			
Angle	Intensity (cd)	Angle	Intensity (cd)
90.0	0.96	0.0	14135.85
87.0	70.04	-3.0	14141.43
84.0	237.97	-6.0	14095.08
81.0	602.02	-9.0	14020.01
78.0	966.07	-12.0	13898.16
75.0	1330.12	-15.0	13735.95
72.0	2021.21	-18.0	13549.25
69.0	2712.31	-21.0	13324.51
66.0	3403.40	-24.0	13066.13
63.0	4268.01	-27.0	12771.94
60.0	5219.37	-30.0	12442.24
57.0	6170.74	-33.0	12073.03
54.0	7129.18	-36.0	11631.22
51.0	8101.78	-39.0	11132.70
48.0	9074.38	-42.0	10577.49
45.0	9860.71	-45.0	9860.71
42.0	10577.49	-48.0	9074.38
39.0	11132.70	-51.0	8101.78
36.0	11631.22	-54.0	7129.18
33.0	12073.03	-57.0	6170.74
30.0	12442.24	-60.0	5219.37
27.0	12771.94	-63.0	4268.01
24.0	13066.13	-66.0	3403.40
21.0	13324.51	-69.0	2712.31
18.0	13549.25	-72.0	2021.21
15.0	13735.95	-75.0	1330.12
12.0	13898.16	-78.0	966.07
9.0	14020.01	-81.0	602.02
6.0	14095.08	-84.0	237.97
3.0	14141.43	-87.0	70.04
0.0	14135.85	-90.0	0.96

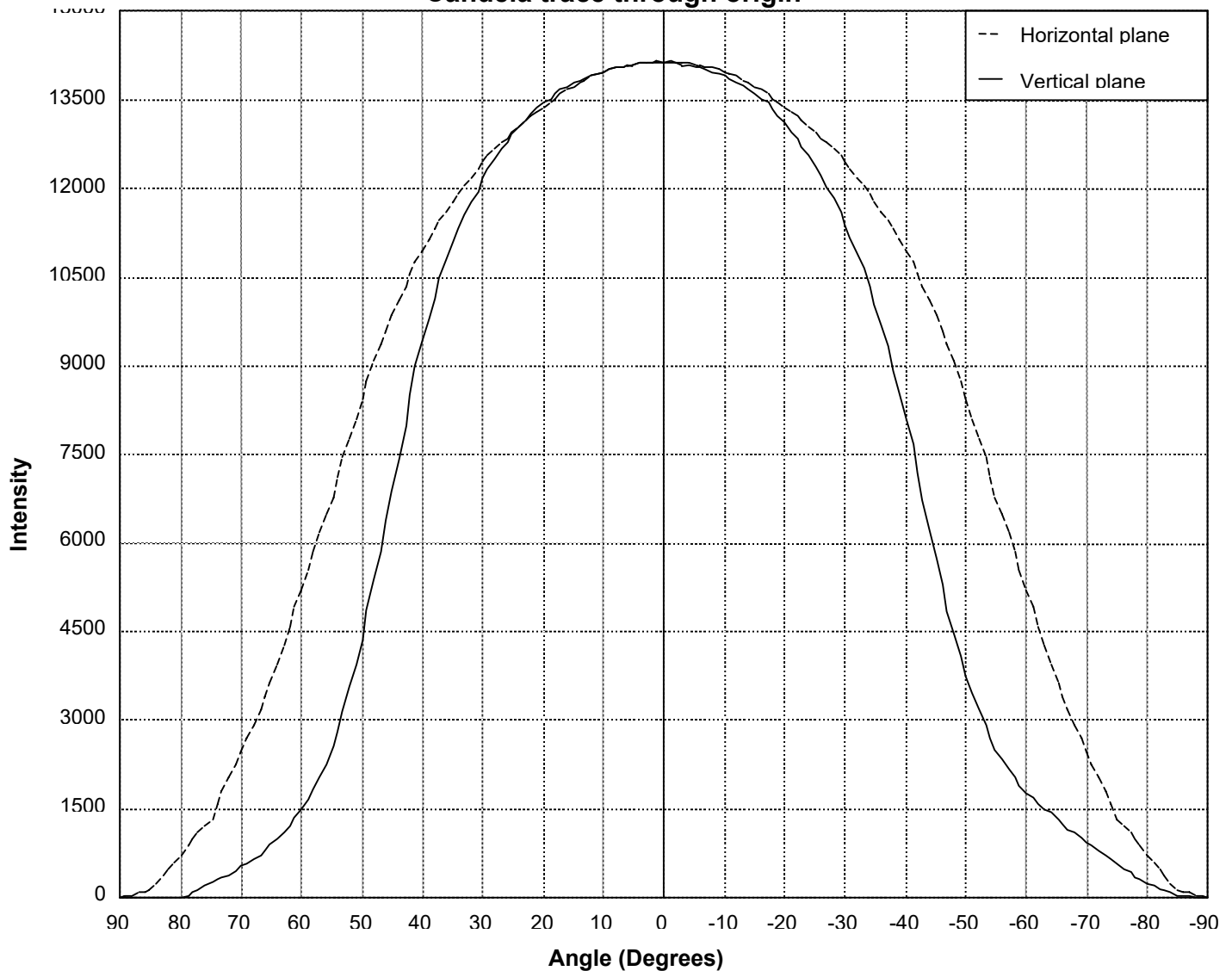
Note: Luminaire orientation as tested.  
The left and right sides of photometric data have been averaged.



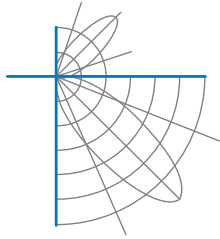
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**Candela trace through origin**



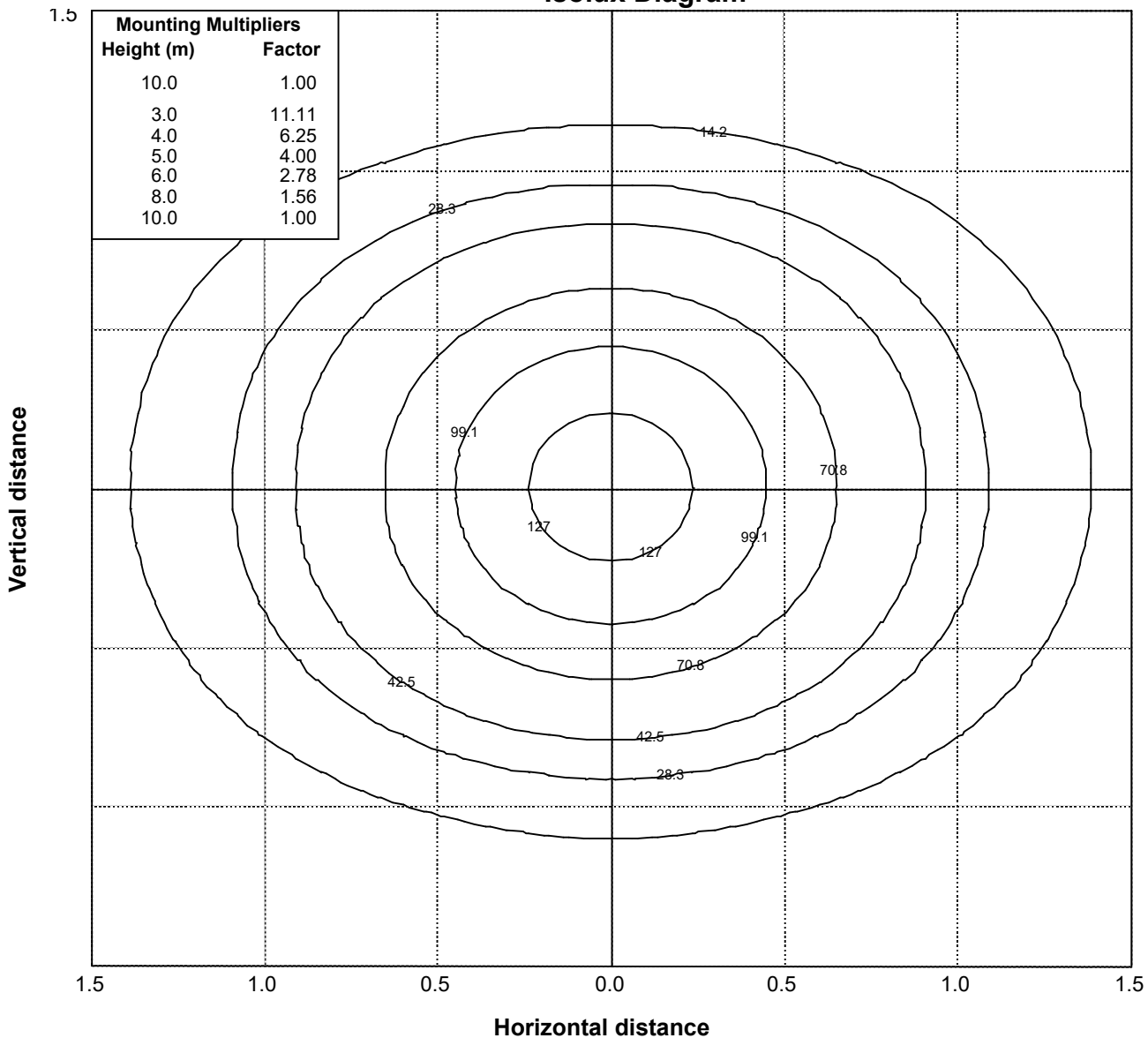
Note: The intensity units are expressed as candelas.  
The left and right sides of photometric data have been averaged.  
Both the vertical and the horizontal trace pass through the nadir.



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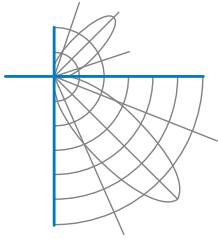
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**Isolux Diagram**



Note: The isolux levels are based on a mounting height of H = 10.0 metres. Grid values show multiples of mounting height.  
The isolux contours are set to 10%, 20%, 30%, 50%, 70%, 90% of the maximum.  
The isolux contour units are expressed as lux. The left and right sides of photometric data have been averaged.

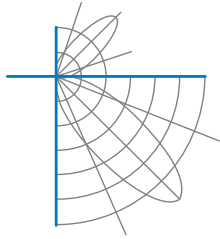




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**Test Distance** 9.5 m  
**Test Temperature** 25.5 °C

**Notes** The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of publications: IES LM-79-19, IES LM-75-19, and IES LM-35-20.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE (B,  $\beta$ ) coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with \* are not covered.

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