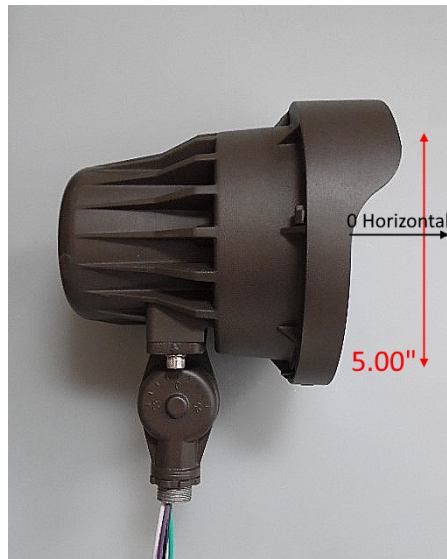


# Report of Test

## LLIA002524-005

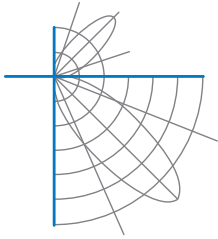
Catalog Number: BFL-30PCS-KNGS (20W/4000K/25deg)  
Knuckle or stake mounted, cast aluminum housing,  
frosted plastic optic enclosure with clear sections in front of each LED.  
86 CW and WW LEDs on one E347474LD8 LED board  
One DB-30EP-M52BHP LED driver  
120.0Vac, 60.00Hz, 0.1655A, 19.64W, 0.989PF, 5.8%THD(i)



### Performance Summary

Total Light Output	3121	lm	Illuminance at 10m	71.1 lux
Luminaire Power	19.6	W	Beam Distance	168.7 Meters (to 0.25 lux)
Luminous Efficacy	159.2	lm/W		
Beam Spread (50%)	27.3° V x 27.8° H		Maximum Intensity	7114.2 cd
Field Spread (10%)	71.0° V x 70.4° H			
NEMA Type	5H x 5V			

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



**Test Report No. LLIA002524-005**

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**Floodlight Summary:**

Report data based on absolute values as measured.

Maximum Luminous Intensity 7114.2 cd  
(Luminaire orientation as tested.) 0.5° vertical  
0.0° horizontal

Beam Spread At 10% of max intensity 71.0° V x 70.4° H  
At 50% of max intensity 27.3° V x 27.8° H  
At 90% of max intensity 9.4° V x 9.2° H

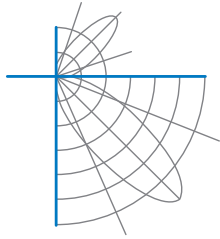
Beam Flux Total 3121 lm  
To 10% of max intensity 2446 lm  
To 50% of max intensity 903 lm  
To 90% of max intensity 138 lm

Total Light Output 3120.7 lm

Signed:

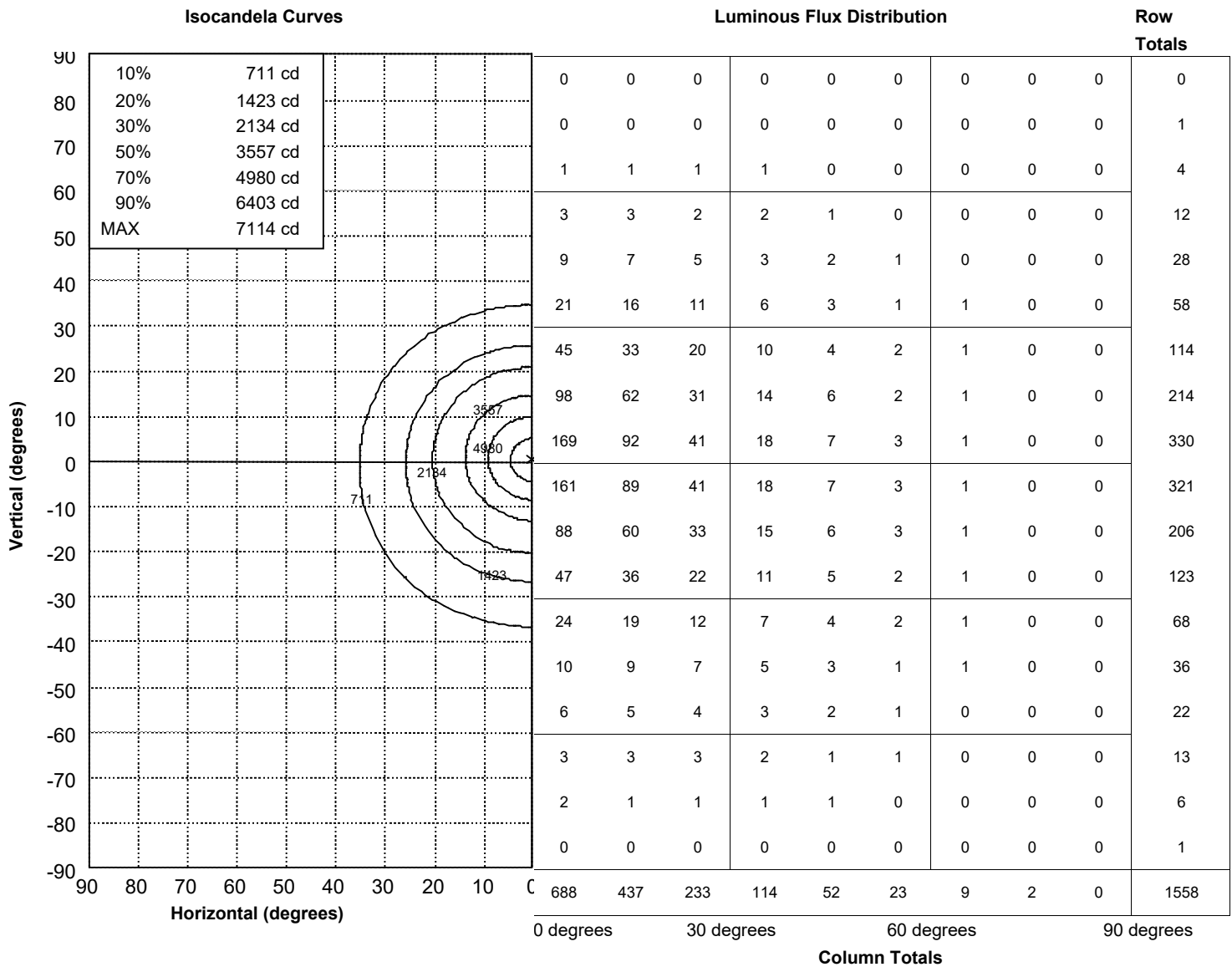
\_\_\_\_\_  
Authorized Signatory

Date of test 4-Nov-2024  
Date of report 5-Nov-2024

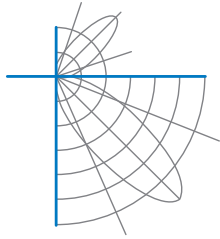


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Note: Left and right sides of photometric data have been averaged.  
Lumen values are tabulated as absolute lumen values.  
Candela values are tabulated as absolute candela values.



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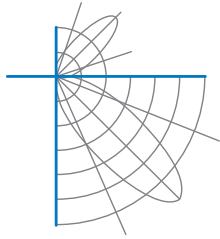
Vertical Angle (degrees)	Left Side Horizontal Angle (degrees)									Lumen Totals
	-90	-60	-30	0	30	60	90	180	270	
-90	0.5	1.5	2.7	4.1	5.3	7.2	8.7	9.2	9.4	1
	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.3	6
	1.2	4.1	10.3	18.3	25.5	34.2	41.3	46.6	50.0	13
	0.0	0.0	0.1	0.3	0.6	0.9	1.2	1.4	1.5	22
	1.8	8.7	21.4	36.4	55.2	74.5	91.5	104.5	111.4	36
	0.0	0.1	0.3	0.7	1.2	1.9	2.5	3.1	3.4	68
-60	2.4	14.3	31.6	60.2	91.5	123.4	153.1	177.2	196.7	123
	0.0	0.1	0.4	1.1	2.0	3.1	4.3	5.2	5.8	206
	2.9	19.0	45.9	83.7	129.8	184.2	227.3	284.7	329.0	321
	0.0	0.2	0.6	1.5	2.9	4.6	6.5	8.8	10.5	330
	3.3	22.6	58.0	110.8	172.2	256.1	425.7	636.8	779.6	214
	0.0	0.2	0.8	1.9	3.8	6.7	12.1	18.9	23.8	114
-30	3.6	24.9	66.4	132.8	211.1	415.2	779.6	1202.1	1525.5	58
	0.0	0.2	0.9	2.4	4.8	10.6	21.7	35.7	46.6	28
	3.8	26.1	71.0	146.1	267.2	597.8	1169.0	2017.0	2877.9	12
	0.0	0.2	1.0	2.6	6.1	15.2	32.6	59.9	88.4	4
	3.8	26.1	72.0	150.2	306.9	714.1	1476.6	3006.0	5548.6	1
	0.0	0.2	1.0	2.7	7.0	18.1	41.3	89.0	161.1	0
0	3.7	24.9	68.8	145.5	300.2	699.7	1462.3	3122.2	5803.3	0
	0.0	0.2	1.0	2.7	6.9	17.7	41.0	92.1	168.7	0
	3.5	22.7	61.6	130.9	250.8	563.7	1105.9	2067.0	3225.6	0
	0.0	0.2	0.9	2.4	5.8	14.3	31.1	61.6	98.0	0
	3.2	19.9	51.8	107.4	184.9	379.4	699.7	1093.8	1451.4	0
	0.0	0.2	0.7	1.9	4.2	9.7	19.6	32.9	45.0	0
30	2.9	16.5	40.2	78.5	131.4	221.1	375.5	552.7	674.1	0
	0.0	0.1	0.5	1.4	2.9	5.7	10.6	16.5	20.7	0
	2.4	12.7	27.4	49.1	81.2	127.5	175.8	239.5	284.5	0
	0.0	0.1	0.4	0.9	1.8	3.2	5.1	7.3	8.9	0
	1.9	8.7	14.7	27.7	44.3	61.7	81.7	99.5	114.2	0
	0.0	0.1	0.2	0.5	1.0	1.6	2.3	3.0	3.5	0
60	1.4	4.7	8.6	11.4	17.3	23.4	28.9	34.1	37.7	0
	0.0	0.0	0.1	0.2	0.4	0.6	0.8	1.1	1.2	0
	0.9	1.8	3.3	3.7	2.4	3.9	3.7	4.4	5.4	0
	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0
	0.3	0.6	0.5	0.4	0.2	0.1	0.0	0.1	0.0	0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
90	0	2	9	23	52	114	233	437	688	1558

Lumen Totals

Legend:

candelas
lumens

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.



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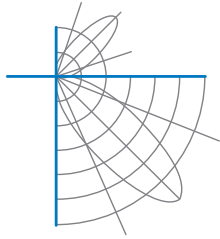
Vertical Angle (degrees)	Right Side Horizontal Angle (degrees)									Lumen Totals
	0	30	60	90	120	150	180	210	240	
-90	9.4 0.3	9.2 0.3	8.7 0.3	7.2 0.2	5.3 0.1	4.1 0.1	2.7 0.0	1.5 0.0	0.5 0.0	1
	50.0 1.5	46.6 1.4	41.3 1.2	34.2 0.9	25.5 0.6	18.3 0.3	10.3 0.1	4.1 0.0	1.2 0.0	6
	111.4 3.4	104.5 3.1	91.5 2.5	74.5 1.9	55.2 1.2	36.4 0.7	21.4 0.3	8.7 0.1	1.8 0.0	13
-60	196.7 5.8	177.2 5.2	153.1 4.3	123.4 3.1	91.5 2.0	60.2 1.1	31.6 0.4	14.3 0.1	2.4 0.0	22
	329.0 10.5	284.7 8.8	227.3 6.5	184.2 4.6	129.8 2.9	83.7 1.5	45.9 0.6	19.0 0.2	2.9 0.0	36
	779.6 23.8	636.8 18.9	425.7 12.1	256.1 6.7	172.2 3.8	110.8 1.9	58.0 0.8	22.6 0.2	3.3 0.0	68
-30	1525.5 46.6	1202.1 35.7	779.6 21.7	415.2 10.6	211.1 4.8	132.8 2.4	66.4 0.9	24.9 0.2	3.6 0.0	123
	2877.9 88.4	2017.0 59.9	1169.0 32.6	597.8 15.2	267.2 6.1	146.1 2.6	71.0 1.0	26.1 0.2	3.8 0.0	206
	5548.6 161.1	3006.0 89.0	1476.6 41.3	714.1 18.1	306.9 7.0	150.2 2.7	72.0 1.0	26.1 0.2	3.8 0.0	321
0	5803.3 168.7	3122.2 92.1	1462.3 41.0	699.7 17.7	300.2 6.9	145.5 2.7	68.8 1.0	24.9 0.2	3.7 0.0	330
	3225.6 98.0	2067.0 61.6	1105.9 31.1	563.7 14.3	250.8 5.8	130.9 2.4	61.6 0.9	22.7 0.2	3.5 0.0	214
	1451.4 45.0	1093.8 32.9	699.7 19.6	379.4 9.7	184.9 4.2	107.4 1.9	51.8 0.7	19.9 0.2	3.2 0.0	114
30	674.1 20.7	552.7 16.5	375.5 10.6	221.1 5.7	131.4 2.9	78.5 1.4	40.2 0.5	16.5 0.1	2.9 0.0	58
	284.5 8.9	239.5 7.3	175.8 5.1	127.5 3.2	81.2 1.8	49.1 0.9	27.4 0.4	12.7 0.1	2.4 0.0	28
	114.2 3.5	99.5 3.0	81.7 2.3	61.7 1.6	44.3 1.0	27.7 0.5	14.7 0.2	8.7 0.1	1.9 0.0	12
60	37.7 1.2	34.1 1.1	28.9 0.8	23.4 0.6	17.3 0.4	11.4 0.2	8.6 0.1	4.7 0.0	1.4 0.0	4
	5.4 0.2	4.4 0.2	3.7 0.1	3.9 0.1	2.4 0.1	3.7 0.1	3.3 0.0	1.8 0.0	0.9 0.0	1
	0.0 0.0	0.1 0.0	0.0 0.0	0.1 0.0	0.2 0.0	0.4 0.0	0.5 0.0	0.6 0.0	0.3 0.0	0
90	688	437	233	114	52	23	9	2	0	1558

Lumen Totals

Legend:

candelas
lumens

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.



**Test Report No. LLIA002524-005**

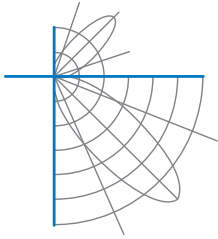
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**Candela trace through origin.**

Vertical Trace			
Angle	Intensity (cd)	Angle	Intensity (cd)
90.0	0.04	0.0	7113.74
87.0	0.00	-3.0	6737.73
84.0	0.00	-6.0	5868.68
81.0	0.02	-9.0	4784.14
78.0	0.57	-12.0	3770.87
75.0	5.15	-15.0	3010.19
72.0	12.71	-18.0	2456.90
69.0	21.98	-21.0	2027.07
66.0	33.72	-24.0	1676.13
63.0	48.06	-27.0	1379.26
60.0	66.28	-30.0	1131.97
57.0	93.22	-33.0	923.75
54.0	128.99	-36.0	739.66
51.0	159.88	-39.0	577.19
48.0	213.76	-42.0	439.62
45.0	289.11	-45.0	331.43
42.0	382.96	-48.0	262.17
39.0	496.72	-51.0	222.45
36.0	637.07	-54.0	208.17
33.0	797.00	-57.0	176.89
30.0	997.60	-60.0	147.79
27.0	1268.31	-63.0	126.62
24.0	1636.75	-66.0	105.50
21.0	2105.76	-69.0	85.45
18.0	2696.61	-72.0	67.00
15.0	3440.17	-75.0	50.32
12.0	4321.24	-78.0	35.54
9.0	5279.68	-81.0	22.89
6.0	6173.64	-84.0	12.17
3.0	6860.56	-87.0	4.78
0.0	7113.74	-90.0	0.90

Horizontal Trace			
Angle	Intensity (cd)	Angle	Intensity (cd)
90.0	0.06	0.0	7113.74
87.0	2.27	-3.0	6793.92
84.0	5.96	-6.0	6011.39
81.0	12.52	-9.0	5062.00
78.0	19.08	-12.0	4101.58
75.0	25.63	-15.0	3244.68
72.0	39.23	-18.0	2575.92
69.0	52.84	-21.0	2052.49
66.0	66.44	-24.0	1639.52
63.0	86.55	-27.0	1310.73
60.0	109.93	-30.0	1049.15
57.0	133.30	-33.0	835.30
54.0	160.98	-36.0	669.06
51.0	197.28	-39.0	524.39
48.0	233.57	-42.0	401.29
45.0	310.20	-45.0	310.20
42.0	401.29	-48.0	233.57
39.0	524.39	-51.0	197.28
36.0	669.06	-54.0	160.98
33.0	835.30	-57.0	133.30
30.0	1049.15	-60.0	109.93
27.0	1310.73	-63.0	86.55
24.0	1639.52	-66.0	66.44
21.0	2052.49	-69.0	52.84
18.0	2575.92	-72.0	39.23
15.0	3244.68	-75.0	25.63
12.0	4101.58	-78.0	19.08
9.0	5062.00	-81.0	12.52
6.0	6011.39	-84.0	5.96
3.0	6793.92	-87.0	2.27
0.0	7113.74	-90.0	0.06

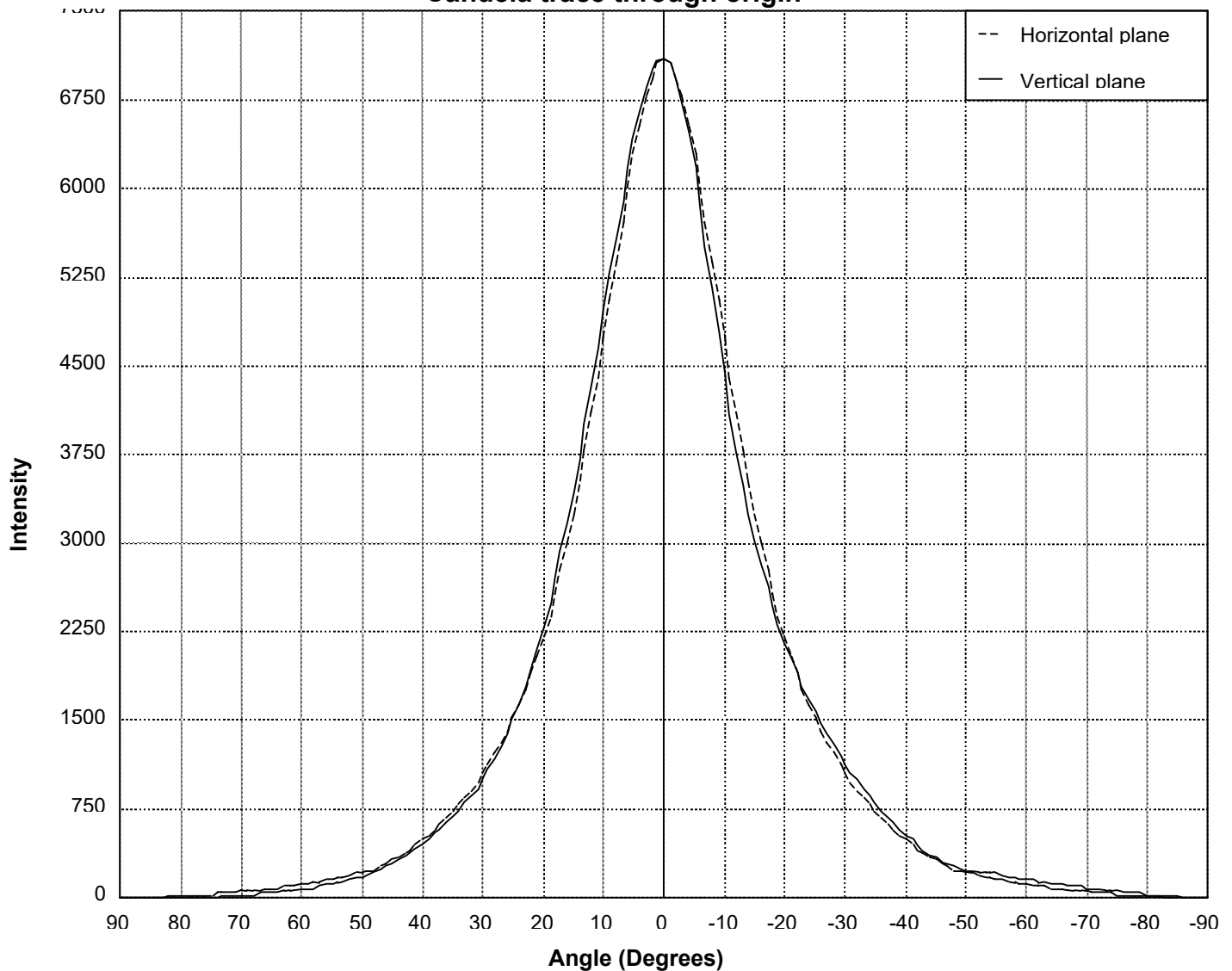
Note: Luminaire orientation as tested.  
The left and right sides of photometric data have been averaged.



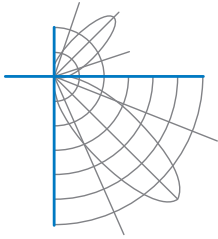
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**Candela trace through origin**



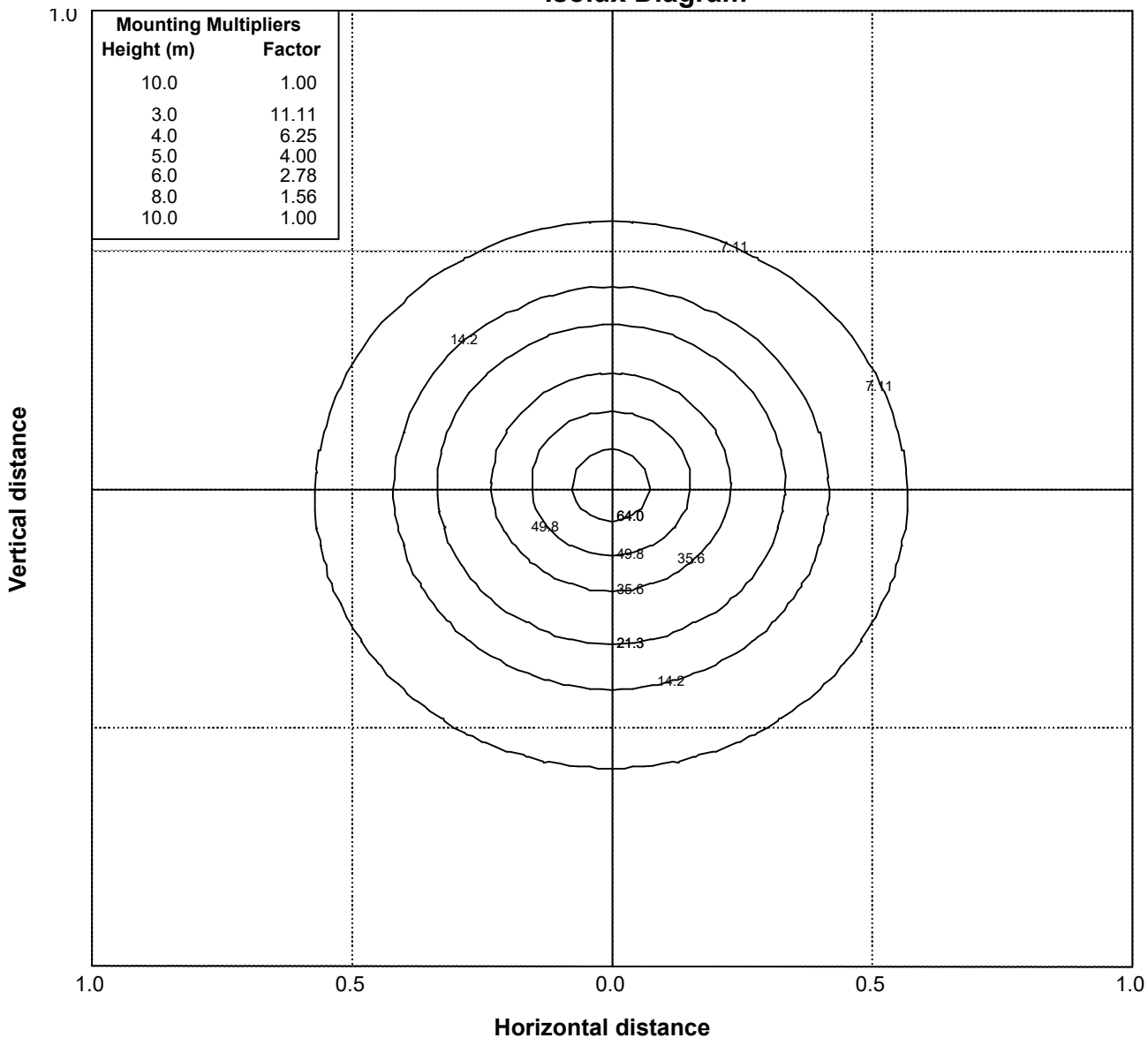
Note: The intensity units are expressed as candelas.  
The left and right sides of photometric data have been averaged.  
Both the vertical and the horizontal trace pass through the nadir.



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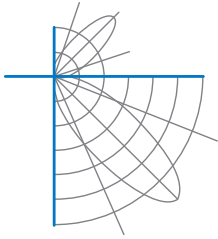
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**Isolux Diagram**



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.

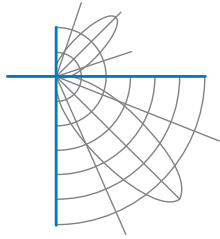




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**Test Distance** 9.5 m  
**Test Temperature** 24.5 °C

**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.