

Report of Test

LLIA002240-004

Indoor Distribution Photometry Test Report

Catalog Number: HBC-30L-50K-PS - 125W Setting
Suspended downlight, cast aluminum luminaire and driver housings, clear plastic enclosure with concentric lenses.

416 white LEDs on white circuit board
One Sosen SS-200CNL-E260BHB LED driver



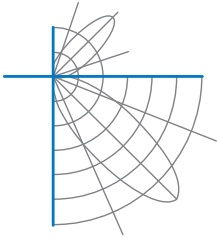
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	19933.3 Lumens
Input Current	1.005 A	Total Efficacy	166.2 Lm/W
Input Power	119.9 W	Downward Flux	19933.3 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.994		
Current THD	3.3 %		

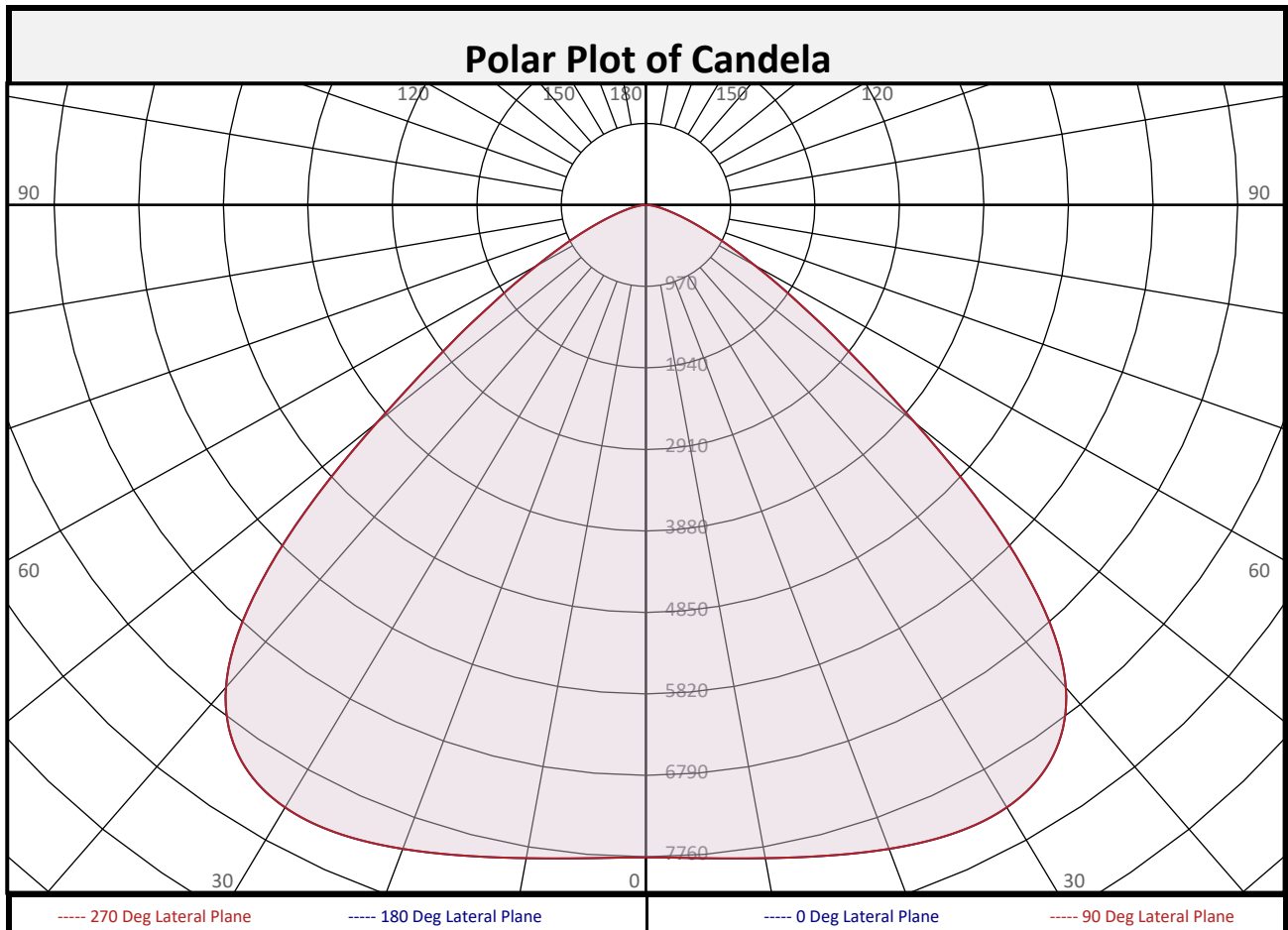
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 10/17/2023
Report date: 10/19/2023

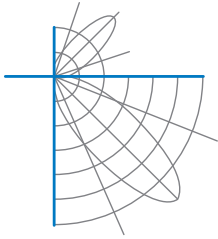
Signed: _____



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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	748.6	3.8%		90-100	0.0	0.0%		0-20	3027	15.2%
10-20	2278	11.4%		100-110	0.0	0.0%		0-30	6849	34.4%
20-30	3822	19.2%		110-120	0.0	0.0%		0-40	11878	59.6%
30-40	5030	25.2%		120-130	0.0	0.0%		0-60	18721	93.9%
40-50	4604	23.1%		130-140	0.0	0.0%		0-80	19886	99.8%
50-60	2238	11.2%		140-150	0.0	0.0%		10-90	19185	96.2%
60-70	879.4	4.4%		150-160	0.0	0.0%		20-50	13456	67.5%
70-80	285.2	1.4%		160-170	0.0	0.0%		40-90	8055	40.4%
80-90	47.6	0.2%		170-180	0.0	0.0%		60-90	1212	6.1%
0-90	19933	100.0%		90-180	0.0	0.0%		0-180	19933	100.0%



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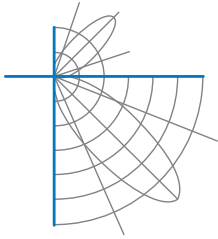
Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	7767	7767	7767	7767	7767	7767	7767	7767	7767
	2.5	7778	7778	7778	7778	7778	7778	7778	7778	7778
	5	7807	7807	7807	7807	7807	7807	7807	7807	7807
	7.5	7847	7847	7847	7847	7847	7847	7847	7847	7847
	10	7897	7897	7897	7897	7897	7897	7897	7897	7897
	12.5	7955	7955	7955	7955	7955	7955	7955	7955	7955
	15	8020	8020	8020	8020	8020	8020	8020	8020	8020
	17.5	8089	8089	8089	8089	8089	8089	8089	8089	8089
	20	8158	8158	8158	8158	8158	8158	8158	8158	8158
	22.5	8220	8220	8220	8220	8220	8220	8220	8220	8220
	25	8269	8269	8269	8269	8269	8269	8269	8269	8269
	27.5	8294	8294	8294	8294	8294	8294	8294	8294	8294
	30	8282	8282	8282	8282	8282	8282	8282	8282	8282
	32.5	8219	8219	8219	8219	8219	8219	8219	8219	8219
	35	8087	8087	8087	8087	8087	8087	8087	8087	8087
	37.5	7859	7859	7859	7859	7859	7859	7859	7859	7859
	40	7496	7496	7496	7496	7496	7496	7496	7496	7496
	42.5	6934	6934	6934	6934	6934	6934	6934	6934	6934
	45	6128	6128	6128	6128	6128	6128	6128	6128	6128
	47.5	5120	5120	5120	5120	5120	5120	5120	5120	5120
50	4023	4023	4023	4023	4023	4023	4023	4023	4023	
52.5	3109	3109	3109	3109	3109	3109	3109	3109	3109	
55	2420	2420	2420	2420	2420	2420	2420	2420	2420	
57.5	1879	1879	1879	1879	1879	1879	1879	1879	1879	
60	1448	1448	1448	1448	1448	1448	1448	1448	1448	
62.5	1118	1118	1118	1118	1118	1118	1118	1118	1118	
65	858	858	858	858	858	858	858	858	858	
67.5	647	647	647	647	647	647	647	647	647	
70	482	482	482	482	482	482	482	482	482	
72.5	352	352	352	352	352	352	352	352	352	
75	254	254	254	254	254	254	254	254	254	
77.5	183	183	183	183	183	183	183	183	183	
80	122	122	122	122	122	122	122	122	122	
82.5	73	73	73	73	73	73	73	73	73	
85	36	36	36	36	36	36	36	36	36	
87.5	9	9	9	9	9	9	9	9	9	
90	0	0	0	0	0	0	0	0	0	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.

North America (issuing laboratory)

Australasia & S.E. Asia



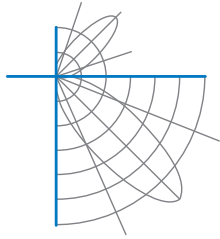
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles									
		0	22.5	45	67.5	90	112.5	135	157.5	180	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	0	0	0	0	0	0	0	0	0	
	92.5	0	0	0	0	0	0	0	0	0	
	95	0	0	0	0	0	0	0	0	0	
	97.5	0	0	0	0	0	0	0	0	0	
	100	0	0	0	0	0	0	0	0	0	
	102.5	0	0	0	0	0	0	0	0	0	
	105	0	0	0	0	0	0	0	0	0	
	107.5	0	0	0	0	0	0	0	0	0	
	110	0	0	0	0	0	0	0	0	0	
	112.5	0	0	0	0	0	0	0	0	0	
	115	0	0	0	0	0	0	0	0	0	
	117.5	0	0	0	0	0	0	0	0	0	
	120	0	0	0	0	0	0	0	0	0	
	122.5	0	0	0	0	0	0	0	0	0	
	125	0	0	0	0	0	0	0	0	0	
	127.5	0	0	0	0	0	0	0	0	0	
	130	0	0	0	0	0	0	0	0	0	
	132.5	0	0	0	0	0	0	0	0	0	
	135	0	0	0	0	0	0	0	0	0	
	137.5	0	0	0	0	0	0	0	0	0	
	140	0	0	0	0	0	0	0	0	0	
	142.5	0	0	0	0	0	0	0	0	0	
	145	0	0	0	0	0	0	0	0	0	
	147.5	0	0	0	0	0	0	0	0	0	
	150	0	0	0	0	0	0	0	0	0	
	152.5	0	0	0	0	0	0	0	0	0	
	155	0	0	0	0	0	0	0	0	0	
	157.5	0	0	0	0	0	0	0	0	0	
	160	0	0	0	0	0	0	0	0	0	
	162.5	0	0	0	0	0	0	0	0	0	
165	0	0	0	0	0	0	0	0	0		
167.5	0	0	0	0	0	0	0	0	0		
170	0	0	0	0	0	0	0	0	0		
172.5	0	0	0	0	0	0	0	0	0		
175	0	0	0	0	0	0	0	0	0		
177.5	0	0	0	0	0	0	0	0	0		
180	0	0	0	0	0	0	0	0	0		

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



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Coefficients of Utilization/Room 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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89			
2	103	96	91	86	101	95	90	85	91	87	83	88	85	81	85	82	80	78			
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68			
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	60			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47			
7	70	58	50	45	69	57	50	44	56	49	44	55	48	44	53	48	44	42			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	40	35	34			
10	57	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32	31			

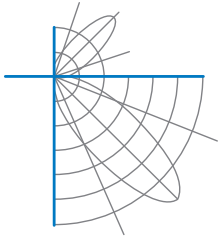
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

Circle of Light Plot			
Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)	
		0-180 deg	90-270 deg
6.0	215.8	9.27	9.27
8.0	121.4	12.36	12.36
10.0	77.7	15.45	15.45
12.0	53.9	18.54	18.54
14.0	39.6	21.63	21.63
16.0	30.3	24.72	24.72

Spacing Criterion	
SC:	1.5

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	282875	282875	282875
45	315645	315645	315645
55	153656	153656	153656
65	73909	73909	73909
75	35791	35791	35791
85	15082	15082	15082

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	99.4°
Field Angle:	130.6°
90-270 Degree Plane	
Beam Angle:	99.4°
Field Angle:	130.6°



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UGR Table - Corrected

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

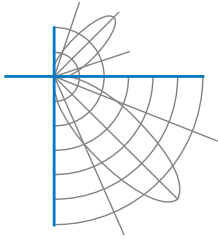
Room Size

UGR Viewed Crosswise

UGR Viewed Endwise

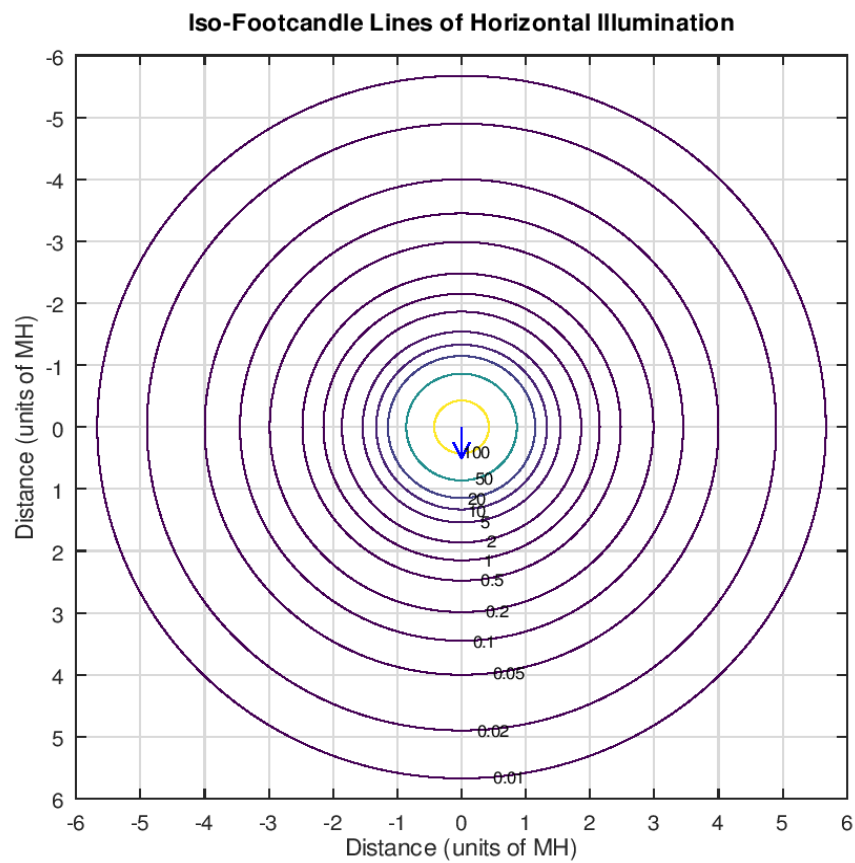
X=2H	Y=2H	25.4	26.8	25.8	27.1	27.5	25.4	26.8	25.8	27.1	27.5
	3H	25.9	27.1	26.3	27.5	27.8	25.9	27.1	26.3	27.5	27.8
	4H	26.0	27.1	26.4	27.5	27.9	26.0	27.1	26.4	27.5	27.9
	6H	26.0	27.1	26.4	27.4	27.8	26.0	27.1	26.4	27.4	27.8
	8H	26.0	27.0	26.4	27.4	27.8	26.0	27.0	26.4	27.4	27.8
	12H	25.9	26.9	26.4	27.3	27.7	25.9	26.9	26.4	27.3	27.7
4H	2H	25.6	26.7	26.0	27.1	27.5	25.6	26.7	26.0	27.1	27.5
	3H	26.1	27.1	26.6	27.5	27.9	26.1	27.1	26.6	27.5	27.9
	4H	26.3	27.1	26.7	27.5	28.0	26.3	27.1	26.7	27.5	28.0
	6H	26.3	27.1	26.8	27.5	28.0	26.3	27.1	26.8	27.5	28.0
	8H	26.3	27.0	26.8	27.4	27.9	26.3	27.0	26.8	27.4	27.9
	12H	26.3	26.9	26.8	27.4	27.9	26.3	26.9	26.8	27.4	27.9
8H	4H	26.3	26.9	26.7	27.4	27.8	26.3	26.9	26.7	27.4	27.8
	6H	26.3	26.9	26.8	27.4	27.9	26.3	26.9	26.8	27.4	27.9
	8H	26.3	26.8	26.8	27.3	27.8	26.3	26.8	26.8	27.3	27.8
	12H	26.3	26.8	26.8	27.3	27.8	26.3	26.8	26.8	27.3	27.8
12H	4H	26.2	26.8	26.7	27.3	27.8	26.2	26.8	26.7	27.3	27.8
	6H	26.3	26.8	26.8	27.3	27.8	26.3	26.8	26.8	27.3	27.8
	8H	26.3	26.8	26.8	27.2	27.8	26.3	26.8	26.8	27.2	27.8

Maximum UGR = 28.0

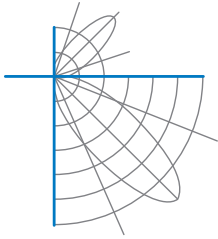


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Iso-Illuminance Plot

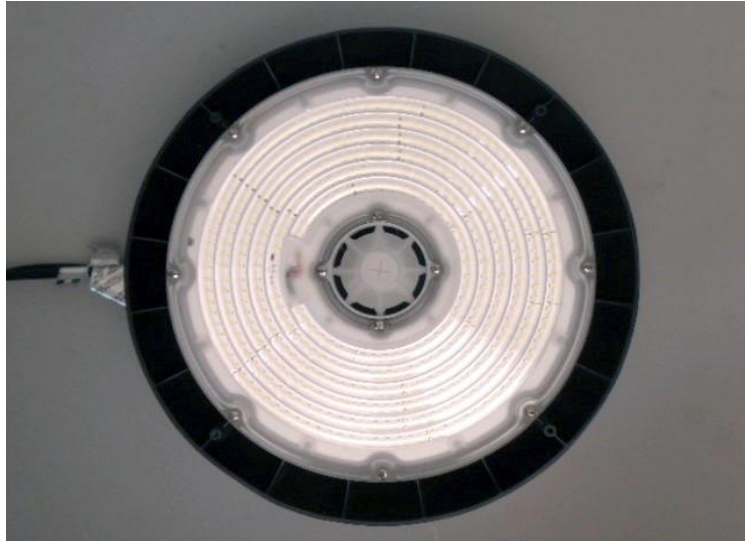


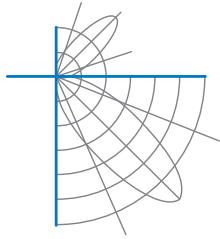
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



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Additional Pictures of Test Subject





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Test Distance 9.5 m
Ambient Temperature 24.7 °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 IES LM-79-19. Format of reports and angular increments based on IES LM-41-20 and LM-46-20.

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 C-Gamma 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.