



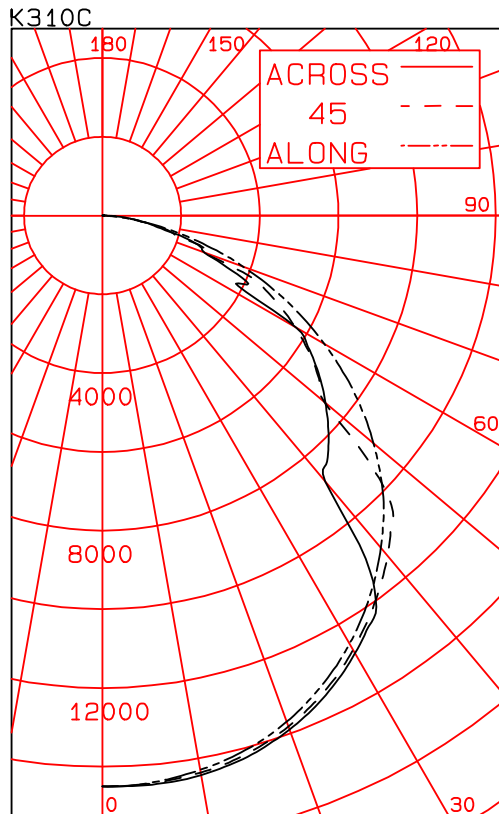
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TEST REPORT NO. K310C-R1  
 ACCREDITED BY NVLAP (LAB CODE 500084-0) TO ISO/IES 17025:2005 FOR IES LM-79-08

PEERLESS ELECTRIC INDOOR LED LUMINAIRE CAT. NO. LOPA-HBI-15-4-400-40K-MV  
 WHITE INTERIOR WITH UPLIGHT SLOTS  
 EIGHT UNIVERSAL EVERLINE LED BOARDS (96 LEDS EACH). LUMEN OUTPUT = 39924 LMS.  
 FOUR UNIVERSAL EVERLINE 120-277V LED DRIVERS MODEL D21CC80UNVTZ-D



CANDLEPOWER SUMMARY

OUTPUT LUMENS

ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	14496	14496	14496	14496	14496	
5	14453	14419	14476	14496	14506	1399
15	14057	14056	14157	14211	14233	3987
25	13178	13224	13341	13414	13439	6131
35	11835	11925	12051	12123	12135	7444
45	10100	10237	10398	8133	8130	7227
55	7802	8075	6566	6602	6617	6339
65	5191	4571	4652	3634	4091	4480
75	2507	2361	1967	2215	2154	2317
85	369	441	542	578	577	587
90	0	8	27	37	31	
95	0	0	0	15	24	12
105	0	0	0	0	0	0
115	0	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	1	2	2	1	1
165	2	2	3	5	7	1
175	4	4	4	4	6	0
180	3	3	3	3	3	

ZONE	LUMENS	% LAMP	%LUMINAIRE
0-30	11516	28.85	28.85
0-40	18959	47.49	47.49
0-60	32525	81.47	81.47
0-90	39909	99.96	99.96
40-90	20949	52.47	52.47
60-90	7383	18.49	18.49
90-180	14	.04	.04
0-180	39924	100.00	100.00

\*\* EFFICACY = 111.1 LMS/WATT \*\*

LUMINANCE SUMMARY-CD. / SQ. M.

S/MH = 1.3  
 SC = 1.3

ANGLE	ALONG	45	ACROSS
45	32945	33622	26153
55	31374	26035	26046
65	28331	24807	21586
75	22342	16760	18065
85	9765	12568	12730

PREPARED BY:

*Stephen Peterson*

DATE:  
 JAN 11, 2016

PREPARED FOR:

PEERLESS ELECTRIC CO. LTD.  
 TORONTO, ONTARIO

TESTED ACCORDING TO IES LM-79-2008 SEC. 10. TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST LUMINOUS OPENING OF LUMINAIRE

LUMENTRA, INC.  
 160 FROBISHER DRIVE, UNIT 5  
 WATERLOO, ONTARIO

TEST REPORT NO. K310C-R1  
 COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

PEERLESS ELECTRIC INDOOR LED LUMINAIRE CAT. NO. LOPA-HBI-15-4-400-40K-MV  
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CANDLEPOWER DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0	14496	14496	14496	14496	14496	14496	
5	14453	14419	14476	14496	14506	14468	1399
10	14294	14287	14366	14424	14431	14360	
15	14057	14056	14157	14211	14233	14142	3987
20	13685	13704	13813	13883	13897	13798	
25	13178	13224	13341	13414	13439	13322	6131
30	12564	12627	12739	12826	12843	12724	
35	11835	11925	12051	12123	12135	12021	7444
40	11012	11130	11276	10266	8821	10647	
45	10100	10237	10398	8133	8130	9471	7227
50	8997	9232	7363	7395	7406	8048	
55	7802	8075	6566	6602	6617	7113	6339
60	6517	6828	5655	5751	5687	6084	
65	5191	4571	4652	3634	4091	4375	4480
70	3825	3394	2732	2871	2766	3073	
75	2507	2361	1967	2215	2154	2218	2317
80	1284	1214	1204	1302	1211	1242	
85	369	441	542	578	577	509	587
90	0	8	27	37	31	22	
95	0	0	0	15	24	7	12
100	0	0	0	0	0	0	
105	0	0	0	0	0	0	0
110	0	0	0	0	0	0	
115	0	0	0	0	0	0	0
120	0	0	0	0	0	0	
125	0	0	0	0	0	0	0
130	0	0	0	0	0	0	
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
150	0	1	1	0	0	1	
155	0	1	2	2	1	1	1
160	1	1	3	4	4	3	
165	2	2	3	5	7	4	1
170	3	2	4	5	6	4	
175	4	4	4	4	6	4	0
180	3	3	3	3	3	3	

LUMENTRA, INC.  
160 FROBISHER DRIVE, UNIT 5  
WATERLOO, ONTARIO

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FOUR UNIVERSAL EVERLINE 120-277V LED DRIVERS MODEL D21CC80UNVTZ-D

AVERAGE LUMINANCE DATA

ANGLE	ALONG	CD. / SQ. M. (FOOTLAMBERTS)			
		22.5	45	67.5	ACROSS
0	33435( 9758)	33435( 9758)	33435( 9758)	33435( 9758)	33435( 9758)
30	33462( 9766)	33592( 9804)	33770( 9856)	33919( 9899)	33856( 9881)
40	33156( 9677)	33409( 9750)	33627( 9814)	30570( 8922)	26167( 7637)
45	32945( 9615)	33208( 9692)	33622( 9813)	26176( 7639)	26153( 7633)
50	32284( 9422)	32984( 9626)	26033( 7598)	26095( 7616)	26021( 7594)
55	31374( 9157)	32216( 9402)	26035( 7598)	26015( 7593)	26046( 7602)
60	30063( 8774)	31237( 9117)	25554( 7458)	25859( 7547)	25447( 7427)
65	28331( 8268)	24609( 7182)	24807( 7240)	19217( 5608)	21586( 6300)
70	25795( 7528)	22547( 6580)	17858( 5212)	18561( 5417)	17781( 5189)
75	22342( 6520)	20596( 6011)	16760( 4891)	18659( 5445)	18065( 5272)
80	17055( 4977)	15583( 4548)	14981( 4372)	15836( 4622)	14606( 4263)
85	9765( 2850)	10862( 3170)	12568( 3668)	12916( 3769)	12730( 3715)

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMENTRA, INC.  
 160 FROBISHER DRIVE, UNIT 5  
 WATERLOO, ONTARIO

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COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.11	1.06	1.06	1.06	1.06	1.02	1.02	1.02	1.02	1.00
1	1.10	1.06	1.02	.98	1.07	1.04	1.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.88	.88	.86	.86
2	1.01	.94	.88	.83	.99	.92	.86	.82	.88	.84	.80	.85	.82	.78	.82	.79	.76	.76	.76	.74	.74
3	.93	.83	.76	.70	.91	.82	.75	.70	.79	.73	.68	.76	.71	.67	.74	.70	.66	.66	.66	.64	.64
4	.86	.75	.67	.61	.84	.74	.66	.60	.71	.65	.60	.69	.63	.59	.67	.62	.58	.58	.58	.56	.56
5	.79	.67	.59	.52	.77	.66	.58	.52	.64	.57	.52	.62	.56	.51	.60	.55	.51	.51	.51	.49	.49
6	.73	.60	.52	.46	.71	.59	.51	.46	.58	.51	.45	.56	.50	.45	.54	.49	.44	.44	.44	.42	.42
7	.67	.54	.46	.40	.66	.53	.45	.40	.52	.44	.39	.50	.44	.39	.49	.43	.39	.39	.39	.37	.37
8	.62	.49	.41	.35	.61	.48	.41	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.34	.34	.32	.32
9	.58	.45	.37	.31	.56	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.30	.30	.30	.29	.29
10	.54	.41	.33	.28	.52	.40	.33	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.27	.27	.25	.25

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES  
 LUMINAIRE INPUT WATTS = 359.5  
 LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.  
 ABSOLUTE PHOTOMETRY TAKEN.

LUMENTRA, INC.  
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AMBIENT TEMPERATURE: 25.3 °C

STABILIZATION TIME: 1 HOUR

THE LUMINAIRE WAS OPERATED IN THE ORIENTATION INDICATED BY THE PICTURES BELOW  
LSI MOVING MIRROR GONIOPHOTOMETER 6240T WAS USED

#### ELECTRICAL CONSUMPTION

INPUT VOLTAGE: 120.0 VRMS  
INPUT CURRENT: 2.998 ARMS  
INPUT WATTAGE: 359.46  
POWER FACTOR: 0.999



SIDE VIEW



VIEWED FROM BELOW