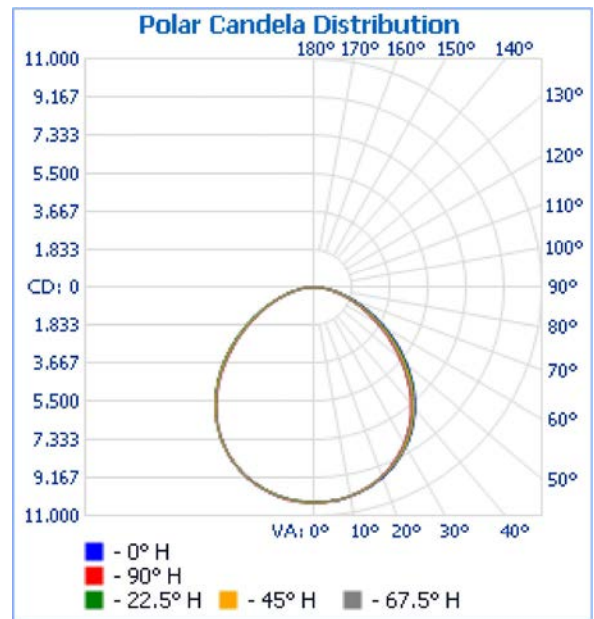


Photometrics Pro

Luminaire Photometric Report

Filename: 55230
Manufacturer: P.Q.L., Inc.
Luminaire: Flat High Bay 4000K (A1+B3)
Lamp Output: 1 lamp(s), rated Lumens/lamp: 26977.64
Max Candela: 10,379.1 at Horizontal: 45°, Vertical: 1°
Input Wattage: 210.7
Luminous Opening: Point
Test: Goniophotometer test
Test Date: 2016-11-10
Test Lab: UL-CCIC (Suzhou) Co.,Ltd
Photometry : Type C
CIE Class: Direct



Roadway Summary

Cutoff Classification:	CUTOFF
Distribution:	Type VS
Max Cd, 90 Deg Vert:	31.0
Max Cd, 80 to <90 Deg:	880.6
	Lumens % Lamp
Downward Street Side:	13,600.6 50.4%
Downward House Side:	13,318.0 49.4%
Downward Total:	26,918.5 99.8%
Upward Street Side:	31.1 0.1%
Upward House Side:	31.0 0.1%
Upward Total:	62.1 0.2%
Total Lumens:	26,980.7 100%

Zonal Lumen Summary

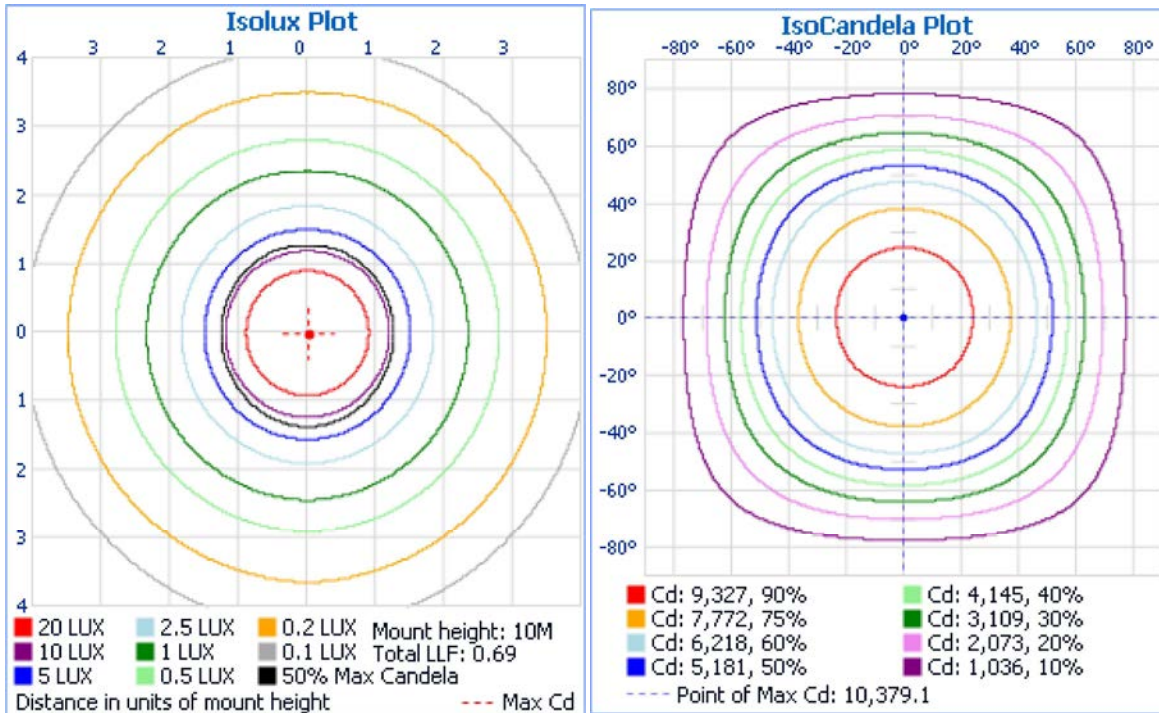
Zone	Lumens	% Luminaire
0-30	8,056.8	29.9%
0-40	13,129.8	48.7%
0-60	22,337.3	82.8%
60-90	4,578.2	17%
70-100	1,769.5	6.6%
90-120	22.7	0.1%
0-90	26,915.5	99.8%
90-180	62.1	0.2%
0-180	26,977.6	100%

Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	97.6%	26,322.9	153.9	155.8
Beam (50%):	71.3%	19,226.4	102.9	106.1
Total:	100%	26,969.0		

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-5	247.2	0.9%	90-95	5.1	0%
5-10	733.8	2.7%	95-100	3.9	0%
10-15	1,195.8	4.4%	100-105	3.7	0%
15-20	1,618.3	6.0%	105-110	3.4	0%
20-25	1,984.3	7.4%	110-115	3.3	0%
25-30	2,277.4	8.4%	115-120	3.4	0%
30-35	2,484.0	9.2%	120-125	3.5	0%
35-40	2,589.1	9.6%	125-130	4.1	0%
40-45	2,580.5	9.6%	130-135	4.4	0%
45-50	2,457.7	9.1%	135-140	4.5	0%
50-55	2,234.7	8.3%	140-145	4.6	0%
55-60	1,934.6	7.2%	145-150	4.3	0%
60-65	1,589.1	5.9%	150-155	3.8	0%
65-70	1,228.6	4.6%	155-160	3.2	0%
70-75	874.0	3.2%	160-165	2.7	0%
75-80	550.1	2.0%	165-170	2.2	0%
80-85	269.6	1.0%	170-175	1.5	0%
85-90	66.8	0.2%	175-180	0.5	0%



Illuminance at a Distance

	Center Beam LUX	Beam Width	
0.7M	23,316.53 LUX	1.8M	1.7M
1.3M	5,829.13 LUX	3.5M	3.3M
2.0M	2,590.73 LUX	5.3M	5.0M
2.7M	1,457.28 LUX	7.1M	6.7M
3.3M	932.66 LUX	8.9M	8.4M
4.0M	647.68 LUX	10.6M	10.0M

■ Vert. Spread: 106.1° ■ Horiz. Spread: 102.9°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50				30				10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	0	50	30	20	0	50	30	20	0	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.06	1.02	1.02	1.02	1.02	1.00	1.00
1	1.09	1.05	1.01	.97	1.07	1.03	.99	.86	.98	.95	.93	.94	.92	.90	.91	.89	.87	.87	.87	.85	.85
2	1.00	.92	.86	.80	.97	.90	.84	.73	.87	.82	.77	.83	.79	.76	.80	.77	.74	.74	.74	.72	.72
3	.91	.81	.74	.67	.89	.80	.73	.63	.77	.71	.66	.74	.69	.64	.72	.67	.63	.63	.63	.61	.61
4	.84	.72	.64	.57	.82	.71	.63	.54	.69	.62	.56	.66	.60	.55	.64	.59	.55	.55	.55	.53	.53
5	.77	.65	.56	.50	.75	.64	.56	.48	.62	.54	.49	.60	.53	.48	.58	.52	.48	.48	.48	.46	.46
6	.72	.59	.50	.44	.70	.58	.49	.42	.56	.48	.43	.54	.48	.43	.53	.47	.42	.42	.42	.40	.40
7	.66	.53	.45	.39	.65	.52	.44	.37	.51	.44	.38	.49	.43	.38	.48	.42	.38	.38	.38	.36	.36
8	.62	.49	.40	.35	.60	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.34	.34	.32	.32
9	.58	.45	.37	.31	.56	.44	.36	.30	.43	.36	.31	.42	.35	.31	.41	.35	.31	.31	.31	.29	.29
10	.54	.41	.33	.28	.53	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.28	.28	.26	.26

Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363	10363
1	10360	10362	10379	10367	10362	10378	10366	10336	10339	10336	10366	10378	10362	10367	10379	10362	10360
2	10356	10334	10371	10369	10357	10358	10361	10345	10355	10345	10361	10358	10357	10369	10371	10334	10356
3	10343	10350	10369	10352	10352	10345	10356	10314	10327	10314	10356	10345	10352	10352	10369	10350	10343
4	10331	10327	10356	10336	10346	10338	10335	10306	10335	10306	10335	10338	10346	10336	10356	10327	10331
5	10334	10318	10342	10326	10331	10320	10318	10293	10309	10293	10318	10320	10331	10326	10342	10318	10334
6	10322	10302	10314	10313	10310	10305	10294	10272	10276	10272	10294	10305	10310	10313	10314	10302	10322
7	10305	10286	10293	10284	10313	10265	10270	10246	10278	10246	10270	10265	10313	10284	10293	10286	10305
8	10285	10254	10269	10262	10276	10245	10250	10212	10246	10212	10250	10245	10276	10262	10269	10254	10285
9	10253	10233	10247	10236	10238	10222	10206	10192	10188	10192	10206	10222	10238	10236	10247	10233	10253
10	10211	10180	10206	10211	10204	10176	10169	10143	10187	10143	10169	10176	10204	10211	10206	10180	10211
11	10182	10159	10178	10166	10149	10143	10140	10124	10136	10124	10140	10143	10149	10166	10178	10159	10182
12	10146	10130	10134	10135	10124	10110	10090	10066	10083	10066	10090	10110	10124	10135	10134	10130	10146
13	10109	10080	10095	10092	10065	10051	10052	10023	10044	10023	10052	10051	10065	10092	10095	10080	10109
14	10069	10033	10054	10026	10017	10022	10001	9985	9998	9985	10001	10022	10017	10026	10054	10033	10069
15	10019	9987	10000	9984	9970	9973	9956	9935	9924	9935	9956	9973	9970	9984	10000	9987	10019
16	9976	9946	9934	9917	9926	9909	9893	9873	9876	9873	9893	9909	9926	9917	9934	9946	9976
17	9917	9894	9892	9863	9861	9850	9847	9826	9823	9826	9847	9850	9861	9863	9892	9894	9917
18	9854	9832	9821	9794	9783	9786	9778	9756	9756	9756	9778	9786	9783	9794	9821	9832	9854
19	9809	9770	9744	9740	9727	9721	9718	9699	9702	9699	9718	9721	9727	9740	9744	9770	9809
20	9759	9709	9684	9664	9647	9651	9642	9635	9627	9635	9642	9651	9647	9664	9684	9709	9759
21	9688	9631	9613	9581	9581	9565	9565	9556	9564	9556	9565	9565	9565	9581	9581	9613	9688
22	9593	9571	9543	9514	9489	9481	9482	9483	9474	9483	9482	9481	9489	9514	9543	9571	9593
23	9520	9485	9466	9431	9406	9397	9396	9388	9385	9388	9396	9397	9406	9431	9466	9485	9520
24	9462	9402	9380	9343	9308	9312	9318	9305	9324	9305	9318	9312	9308	9343	9380	9402	9462
25	9353	9345	9290	9244	9210	9198	9222	9210	9238	9210	9222	9198	9210	9244	9290	9345	9353
26	9272	9244	9196	9140	9126	9117	9112	9127	9143	9127	9112	9117	9126	9140	9196	9244	9272
27	9158	9147	9102	9046	9028	9010	9021	9033	9028	9033	9021	9010	9028	9046	9102	9147	9158
28	9074	9040	9013	8947	8913	8903	8914	8921	8921	8921	8914	8903	8913	8947	9013	9040	9074
29	8975	8948	8913	8832	8799	8806	8814	8814	8804	8814	8814	8806	8799	8832	8913	8948	8975
30	8878	8852	8808	8719	8694	8668	8702	8721	8695	8721	8702	8668	8694	8719	8808	8852	8878
31	8762	8739	8694	8604	8575	8578	8586	8613	8582	8613	8586	8578	8575	8604	8694	8739	8762
32	8673	8616	8576	8477	8453	8445	8465	8468	8474	8468	8465	8445	8453	8477	8576	8616	8673
33	8533	8498	8438	8356	8313	8313	8344	8339	8335	8339	8344	8313	8313	8356	8438	8498	8533
34	8426	8367	8322	8229	8192	8184	8215	8222	8198	8222	8215	8184	8192	8229	8322	8367	8426
35	8291	8250	8197	8095	8062	8044	8084	8082	8100	8082	8084	8044	8062	8095	8197	8250	8291
36	8153	8124	8050	7960	7910	7902	7949	7944	7938	7944	7949	7902	7910	7960	8050	8124	8153
37	8026	7969	7907	7819	7783	7766	7801	7807	7799	7807	7801	7766	7783	7819	7907	7969	8026
38	7870	7833	7775	7670	7614	7622	7649	7671	7653	7671	7649	7622	7614	7670	7775	7833	7870
39	7740	7698	7624	7524	7448	7453	7496	7507	7518	7507	7496	7453	7448	7524	7624	7698	7740
40	7576	7545	7477	7350	7287	7303	7345	7366	7356	7366	7345	7303	7287	7350	7477	7545	7576
41	7424	7381	7316	7195	7132	7126	7181	7208	7177	7208	7181	7126	7132	7195	7316	7381	7424
42	7269	7226	7137	7021	6953	6970	7017	7046	7021	7046	7017	6970	6953	7021	7137	7226	7269
43	7111	7061	6972	6850	6781	6785	6848	6876	6890	6876	6848	6785	6781	6850	6972	7061	7111
44	6959	6896	6803	6667	6605	6601	6671	6699	6693	6699	6671	6601	6605	6667	6803	6896	6959
45	6783	6726	6631	6482	6407	6425	6504	6541	6535	6541	6504	6425	6407	6482	6631	6726	6783
46	6624	6543	6448	6286	6226	6231	6325	6377	6345	6377	6325	6231	6226	6286	6448	6543	6624
47	6418	6367	6257	6102	6055	6067	6131	6188	6155	6188	6131	6067	6055	6102	6257	6367	6418
48	6244	6194	6072	5918	5844	5875	5946	6011	5994	6011	5946	5875	5844	5918	6072	6194	6244
49	6089	6003	5880	5734	5662	5676	5778	5841	5802	5841	5778	5676	5662	5734	5880	6003	6089
50	5888	5823	5690	5541	5464	5495	5581	5643	5606	5643	5581	5495	5464	5541	5690	5823	5888
51	5730	5648	5500	5349	5277	5290	5386	5456	5430	5456	5386	5290	5277	5349	5500	5648	5730
52	5515	5443	5294	5146	5076	5115	5197	5266	5238	5266	5197	5115	5076	5146	5294	5443	5515
53	5329	5250	5108	4960	4892	4912	4999	5078	5041	5078	4999	4912	4892	4960	5108	5250	5329
54	5168	5066	4926	4756	4686	4716	4818	4890	4853	4890	4818	4716	4686	4756	4926	5066	5168
55	4973	4863	4726	4573	4500	4535	4608	4697	4659	4697	4608	4535	4500	4573	4726	4863	4973
56	4804	4676	4542	4386	4316	4341	4419	4511	4474	4511	4419	4341	4316	4386	4542	4676	4804
57	4574	4491	4346	4187	4117	4139	4235	4316	4278	4316	4235	4139	4117	4187	4346	4491	4574
58	4407	4299	4152	3998	3930	3950	4037	4125	4086	4125	4037	3950	3930	3998	4152	4299	4407
59	4210	4106	3964	3813	3743	3764	3851	3942	3897	3942	3851	3764	3743	3813	3964	4106	4210
60	4024	3918	3776	3629	3562	3580	3666	3758	3717	3758	3666	3580	3562	3629	3776	3918	4024
61	3839	3729	3591	3449	3385	3400	3484	3575	3533	3575	3484	3400	3385	3449	3591	3729	3839
62	3654	3546	3411	3272	3209	3222	3303	3397	3354	3397	3303	3222	3209	3272	3411	3546	3654
63	3470	3364	3232	3098	3035	3048	3127	3218	3177	3218	3127	3048	3035	3098	3232	3364	3470
64	3291	3184	3056	2926	2868	2879	2956	3040	2998	3040	2956	2879	2868	2926	3056	3184	3291
65	3113	3007	2884	2760	2702	2711	2785	2869	2825	2869	2785	2711	2702	2760	2884	3007	3113
66	2938	2832	2716	2596	2543	2551	2619	2701	2654	2701	2619	2551	2543	2596	2716	2832	2938
67	2766	2661	2549	2438	2385	2393	2456	2535	2488	2535	2456	2393	2385	2438	2549	2661	2766
68	2596	2493	2386	2279	2230	2238	2296	2370	2324	2370	2296	2238	2230	2279	2386	2493	2596
69	2428	2330	2228	2126	2082	2085	2142	2207	2161	2207	2142	2085	2082	2126	2228	2330	2428
70	2268	2168	2071	1979	1935	1938	1988	2048	2005	2048	1988	1938	1935	1979	2071	2168	2268
71	2109	2014	1922	1835	1791	1793	1838	1894	1853	1894	1838	1793	1791	1835			

75	1517	1444	1370	1301	1265	1262	1286	1326	1292	1326	1286	1262	1265	1301	1370	1444	1517
76	1378	1309	1241	1179	1146	1140	1158	1195	1163	1195	1158	1140	1146	1179	1241	1309	1378
77	1248	1182	1120	1062	1028	1024	1037	1072	1044	1072	1037	1024	1028	1062	1120	1182	1248
78	1119	1058	999	944	915	910	923	953	929	953	923	910	915	944	999	1058	1119
79	996	937	884	834	806	800	809	838	814	838	809	800	806	834	884	937	996
80	881	821	773	728	704	693	704	725	705	725	704	693	704	728	773	821	881
81	761	709	668	626	602	594	600	619	598	619	600	594	602	626	668	709	761
82	655	602	568	529	507	497	501	517	500	517	501	497	507	529	568	602	655
83	549	505	471	438	417	408	409	422	406	422	409	408	417	438	471	505	549
84	448	410	381	350	334	327	323	335	318	335	323	327	334	350	381	410	448
85	363	323	298	273	257	251	247	255	238	255	247	251	257	273	298	323	363
86	277	243	223	202	186	180	176	181	167	181	176	180	186	202	223	243	277
87	202	172	156	139	126	122	115	116	108	116	115	122	126	139	156	172	202
88	134	109	99	85	76	71	64	64	54	64	64	71	76	85	99	109	134
89	75	58	52	41	39	35	30	29	18	29	30	35	39	41	52	58	75
90	31	22	22	20	18	14	13	12	11	12	13	14	18	20	22	22	31
91	10	12	12	7	6	8	10	10	8	10	10	8	6	7	12	12	10
92	10	10	9	8	5	8	8	10	10	10	8	8	5	8	9	10	10
93	9	6	9	8	8	8	9	9	10	9	9	8	8	8	9	6	9
94	8	9	9	10	7	8	8	9	11	9	8	8	7	10	9	9	8
95	8	8	7	8	5	6	5	8	9	8	5	6	5	8	7	8	8
96	7	8	6	7	6	6	8	9	9	9	8	6	6	7	6	8	7
97	7	7	8	7	6	7	8	9	8	9	8	7	6	7	8	7	7
98	7	8	7	6	6	8	7	9	8	9	7	8	6	6	7	8	7
99	8	8	6	6	6	5	6	8	7	8	6	5	6	6	6	8	8
100	8	9	9	7	5	5	6	9	9	9	6	5	5	7	9	9	8
101	7	8	7	6	6	6	6	8	6	8	6	6	6	6	7	8	7
102	8	8	6	6	5	6	8	10	7	10	8	6	5	6	6	8	8
103	8	8	6	6	5	7	6	8	10	8	6	7	5	6	6	8	8
104	9	8	8	6	5	4	6	7	8	7	6	4	5	6	8	8	9
105	7	8	8	7	5	6	7	9	8	9	7	6	5	7	8	8	7
106	6	5	6	5	4	8	7	9	7	9	7	8	4	5	6	5	6
107	9	8	5	7	5	7	6	6	6	6	6	7	5	7	5	8	9
108	5	8	4	6	3	6	7	7	7	7	7	6	3	6	4	8	5
109	8	7	8	6	4	7	6	8	7	8	6	7	4	6	8	7	8
110	8	8	7	7	6	5	7	8	9	8	7	5	6	7	7	8	8
111	7	8	5	5	4	7	4	7	7	7	4	7	4	5	5	8	7
112	5	8	7	6	6	7	6	8	8	8	6	7	6	6	7	8	5
113	8	7	6	6	5	8	6	7	4	7	6	8	5	6	6	7	8
114	5	8	6	8	4	7	6	7	4	7	6	7	4	8	6	8	5
115	6	6	7	7	6	7	8	6	6	6	8	7	6	7	7	6	6
116	7	6	6	7	7	8	6	8	7	8	6	8	7	7	6	6	7
117	6	9	6	9	5	8	7	8	8	8	7	8	5	9	6	9	6
118	6	7	7	8	6	8	6	7	6	7	6	8	6	8	7	7	6
119	8	5	6	7	6	9	7	7	8	7	7	9	6	7	6	5	8
120	7	7	8	8	5	6	7	8	6	8	7	6	5	8	8	7	7
121	6	6	7	8	4	8	9	9	9	9	9	8	4	8	7	6	6
122	7	7	7	10	4	10	8	8	7	8	8	10	4	10	7	7	7
123	7	7	8	6	5	9	9	8	8	9	8	9	5	6	8	7	7
124	4	8	9	8	7	9	9	12	9	12	9	9	7	8	9	8	4
125	10	9	8	8	5	9	11	9	7	9	11	9	5	8	8	9	10
126	8	9	11	10	7	9	10	9	9	9	10	9	7	10	11	9	8
127	5	10	10	9	6	10	10	8	9	8	10	10	6	9	10	10	5
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129	10	10	10	10	7	11	10	9	12	9	10	11	7	10	10	10	10
130	10	11	10	10	7	12	11	10	10	10	11	12	7	10	10	11	10
131	8	8	11	11	6	12	12	10	9	10	12	12	6	11	11	8	8
132	9	8	12	12	7	10	12	11	10	11	12	10	7	12	12	8	9
133	11	10	14	12	9	10	13	11	14	11	13	10	9	12	14	10	11
134	10	11	13	14	10	12	13	10	12	10	13	12	10	14	13	11	10
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137	10	10	13	11	12	11	14	12	11	12	14	11	12	11	13	10	10
138	9	12	16	12	10	12	12	14	14	14	12	12	10	12	16	12	9
139	12	13	16	12	9	13	14	13	12	13	14	13	9	12	16	13	12
140	13	14	14	10	11	12	15	15	13	15	15	12	11	10	14	14	13
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145	15	17	15	12	10	13	16	16	16	16	16	13	10	12	15	17	15
146	15	16	15	13	11	11	16	15	15	15	16	11	11	13	15	16	15
147	13	17	16	14	11	13	16	17	17	17	16	13	11	14	16	17	13
148	18	15	15	13	11	13	15	17	18	17	15	13	11	13	15	15	18
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151	16	15	15	13	12	13	15	19	17	19	15	13	12	13	15	15	16
152	17	18	16	14	12	14	15	17	17	17	14	14	12	14	16	18	17

Luminaire Report Summary

IESNA:LM-63-2002
[TEST] Goniophotometer test
[TESTLAB] UL-CCIC (Suzhou) Co.,Ltd
[TESTDATE] 2016-11-10
[ISSUEDATE] 2016-11-10
[MANUFAC] P.Q.L., Inc.
[LUMCAT]
[LUMINAIRE] 55230/4000K
[LAMP]

FILE: CREATED USING ABSOLUTE PHOTOMETRY
FILE: CANDELA MULTIPLIER: 1
FILE: VERTICAL ANGLES: 181, HORIZONTAL ANGLES: 17
FILE: COORDINATE SYSTEM: TYPE C
FILE: UNIT OF MEASURE: STANDARD
FILE: BALLAST FACTOR: 1

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Reported data calculated from manufacturer's data file, based on IES recommended methods.