



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300

## Integrating Sphere Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C78.377-2011, ANSI C82.77-2002  
CIE 13.3-1995, CIE 15-2004

Prepared For  
Elemental LED Inc, DBA Diode LED  
Wes Buck  
Suite 211, 1195 Park Ave.  
Emeryville, CA 94608  
United States

Catalog Number  
BLAZE™ 12v LED Tape Light DI-12V-BL42-80XX

Order Number  
10460077  
Test Number  
758925

Test Date

2014-09-23

Prepared By

*Javier Caban*

Javier Caban, Technician

Approved By

*Eric M. Gaudreau*

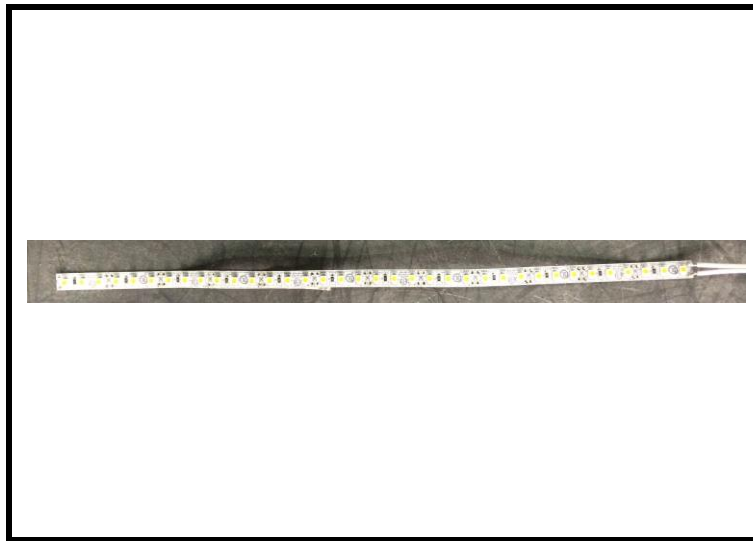
Eric Gaudreau, Engineering Project Handler

The results contained in this report pertain only to the tested sample.  
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Luminaire Description: LED strip  
Catalog Number: BLAZE™ 12v LED Tape Light DI-12V-BL42-80XX  
Lamp: 36 white LEDs  
Mounting: Surface  
Ballast/Driver: One Meanwell LPV-60-12

Luminaire



#### Summary of Results

Radiant Flux: 973.6 mW  
Luminous Flux: 308.5 Lumens  
Luminaire Efficacy: 73.3 Lumens/Watt  
CCT: 4236 K  
CRI (Ra): 81.6  
Chromaticity (x): 0.3713  
Chromaticity (y): 0.3738  
Chromaticity (u): 0.2202  
Chromaticity (v): 0.3326  
Duv: 0.0012

#### Test Conditions

Test Temperature: 24.5 °C  
Voltage: 120.0 VAC  
Current: 0.08603 A  
Power: 4.210 W  
Power Factor: 0.408  
Frequency: 60 Hz  
Current THD: 190 %

Testing was performed in a 1-meter integrating sphere using the 4 $\pi$  geometry method.

Absorption correction was employed for this measurement.

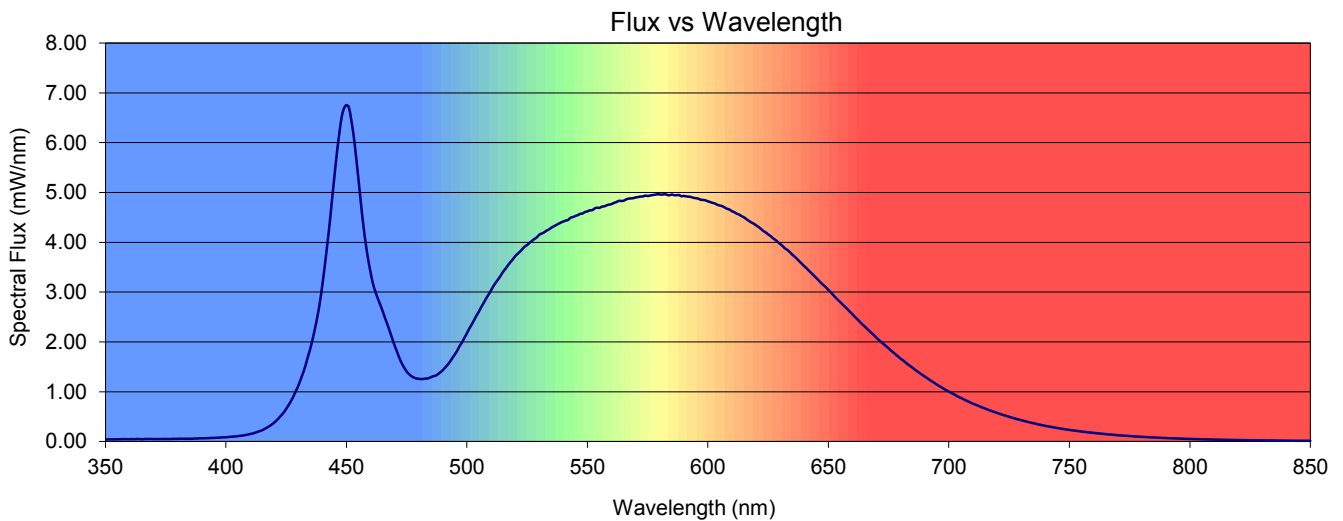
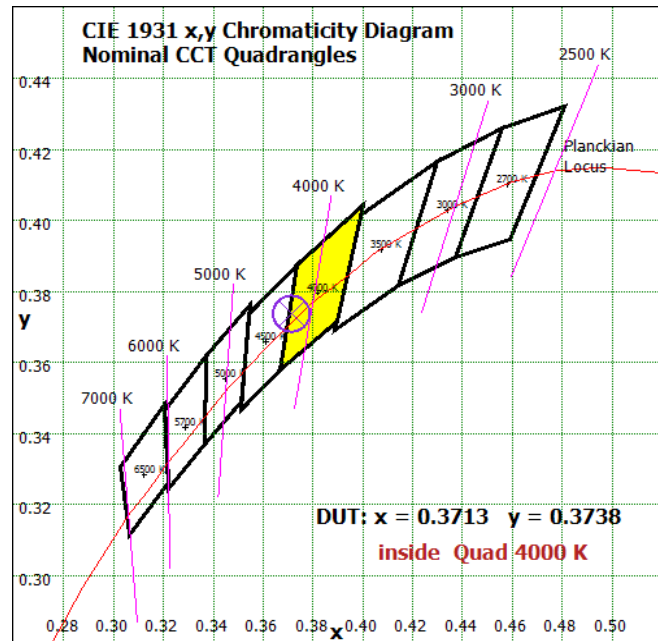
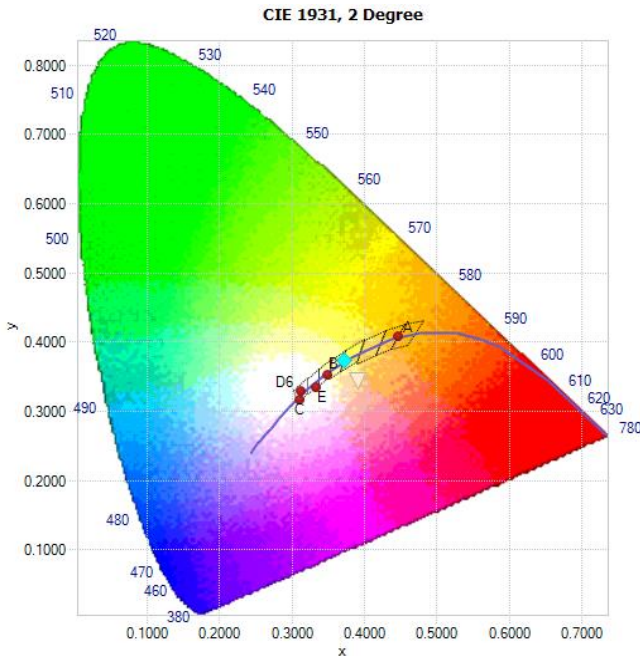


Chromaticity Coordinates

x	y	u	v	u'	v'	Duv
0.3713	0.3738	0.2202	0.3326	0.2202	0.4989	0.0012

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81.6	80.4	85.3	88.1	81.8	79.5	78.6	88.4	71.0	19.8	64.1	79.2	53.3	81.1	93.1





Spectral Power Distribution

$\lambda$ (nm)	mW/nm	$\lambda$ (nm)	mW/nm	$\lambda$ (nm)	mW/nm	$\lambda$ (nm)	mW/nm	$\lambda$ (nm)	mW/nm	$\lambda$ (nm)	mW/nm	$\lambda$ (nm)	mW/nm
350	0.0373	422	0.472	494	1.68	566	4.86	638	3.62	710	0.760	782	0.0887
351	0.0431	423	0.528	495	1.75	567	4.88	639	3.57	711	0.740	783	0.0860
352	0.0427	424	0.583	496	1.83	568	4.88	640	3.52	712	0.721	784	0.0831
353	0.0424	425	0.656	497	1.92	569	4.89	641	3.48	713	0.701	785	0.0814
354	0.0438	426	0.730	498	1.99	570	4.90	642	3.43	714	0.680	786	0.0788
355	0.0447	427	0.812	499	2.08	571	4.91	643	3.38	715	0.662	787	0.0763
356	0.0462	428	0.905	500	2.17	572	4.92	644	3.33	716	0.642	788	0.0741
357	0.0459	429	1.01	501	2.27	573	4.92	645	3.28	717	0.624	789	0.0716
358	0.0492	430	1.11	502	2.35	574	4.94	646	3.23	718	0.607	790	0.0699
359	0.0468	431	1.24	503	2.44	575	4.93	647	3.18	719	0.591	791	0.0680
360	0.0465	432	1.37	504	2.53	576	4.94	648	3.14	720	0.574	792	0.0659
361	0.0485	433	1.52	505	2.61	577	4.95	649	3.10	721	0.558	793	0.0637
362	0.0463	434	1.70	506	2.70	578	4.95	650	3.04	722	0.541	794	0.0617
363	0.0506	435	1.86	507	2.79	579	4.96	651	3.00	723	0.526	795	0.0600
364	0.0500	436	2.06	508	2.87	580	4.96	652	2.94	724	0.512	796	0.0586
365	0.0455	437	2.28	509	2.95	581	4.96	653	2.89	725	0.496	797	0.0566
366	0.0485	438	2.51	510	3.03	582	4.97	654	2.84	726	0.482	798	0.0549
367	0.0511	439	2.79	511	3.12	583	4.95	655	2.80	727	0.468	799	0.0534
368	0.0502	440	3.13	512	3.19	584	4.94	656	2.75	728	0.453	800	0.0523
369	0.0516	441	3.51	513	3.26	585	4.96	657	2.70	729	0.441	801	0.0507
370	0.0496	442	3.93	514	3.33	586	4.95	658	2.65	730	0.427	802	0.0488
371	0.0498	443	4.35	515	3.41	587	4.94	659	2.60	731	0.416	803	0.0477
372	0.0495	444	4.83	516	3.47	588	4.95	660	2.56	732	0.403	804	0.0464
373	0.0496	445	5.31	517	3.53	589	4.92	661	2.50	733	0.391	805	0.0450
374	0.0509	446	5.77	518	3.60	590	4.93	662	2.46	734	0.379	806	0.0437
375	0.0510	447	6.16	519	3.65	591	4.92	663	2.41	735	0.368	807	0.0431
376	0.0505	448	6.50	520	3.72	592	4.92	664	2.36	736	0.357	808	0.0412
377	0.0500	449	6.69	521	3.77	593	4.91	665	2.31	737	0.345	809	0.0403
378	0.0539	450	6.75	522	3.81	594	4.89	666	2.26	738	0.334	810	0.0392
379	0.0530	451	6.71	523	3.86	595	4.89	667	2.22	739	0.326	811	0.0386
380	0.0536	452	6.46	524	3.91	596	4.88	668	2.17	740	0.314	812	0.0369
381	0.0563	453	6.14	525	3.94	597	4.85	669	2.13	741	0.306	813	0.0358
382	0.0551	454	5.72	526	3.99	598	4.85	670	2.08	742	0.297	814	0.0353
383	0.0558	455	5.27	527	4.03	599	4.84	671	2.04	743	0.288	815	0.0341
384	0.0553	456	4.80	528	4.07	600	4.82	672	1.99	744	0.279	816	0.0329
385	0.0550	457	4.36	529	4.10	601	4.81	673	1.95	745	0.272	817	0.0318
386	0.0558	458	3.98	530	4.15	602	4.79	674	1.91	746	0.263	818	0.0310
387	0.0597	459	3.67	531	4.18	603	4.78	675	1.87	747	0.255	819	0.0307
388	0.0599	460	3.41	532	4.20	604	4.75	676	1.83	748	0.248	820	0.0299
389	0.0641	461	3.17	533	4.23	605	4.74	677	1.79	749	0.240	821	0.0285
390	0.0645	462	3.01	534	4.26	606	4.72	678	1.74	750	0.234	822	0.0281
391	0.0660	463	2.88	535	4.29	607	4.70	679	1.71	751	0.226	823	0.0275
392	0.0668	464	2.75	536	4.32	608	4.67	680	1.66	752	0.220	824	0.0260
393	0.0686	465	2.62	537	4.34	609	4.66	681	1.63	753	0.213	825	0.0260
394	0.0712	466	2.48	538	4.37	610	4.62	682	1.59	754	0.207	826	0.0252
395	0.0730	467	2.35	539	4.40	611	4.60	683	1.55	755	0.200	827	0.0247
396	0.0747	468	2.21	540	4.42	612	4.57	684	1.51	756	0.195	828	0.0243
397	0.0777	469	2.07	541	4.44	613	4.56	685	1.48	757	0.189	829	0.0242
398	0.0805	470	1.93	542	4.45	614	4.52	686	1.44	758	0.184	830	0.0224
399	0.0853	471	1.80	543	4.49	615	4.50	687	1.40	759	0.178	831	0.0222
400	0.0857	472	1.68	544	4.51	616	4.47	688	1.37	760	0.173	832	0.0210
401	0.0887	473	1.57	545	4.53	617	4.43	689	1.34	761	0.168	833	0.0207
402	0.0957	474	1.48	546	4.54	618	4.40	690	1.30	762	0.164	834	0.0206
403	0.0978	475	1.41	547	4.57	619	4.37	691	1.27	763	0.158	835	0.0203
404	0.104	476	1.35	548	4.58	620	4.34	692	1.24	764	0.153	836	0.0195
405	0.109	477	1.31	549	4.61	621	4.31	693	1.21	765	0.149	837	0.0189
406	0.115	478	1.29	550	4.62	622	4.27	694	1.18	766	0.144	838	0.0186
407	0.120	479	1.27	551	4.64	623	4.23	695	1.14	767	0.140	839	0.0180
408	0.129	480	1.26	552	4.64	624	4.20	696	1.11	768	0.136	840	0.0175
409	0.139	481	1.25	553	4.68	625	4.16	697	1.09	769	0.132	841	0.0169
410	0.150	482	1.26	554	4.69	626	4.13	698	1.06	770	0.127	842	0.0163
411	0.160	483	1.26	555	4.69	627	4.08	699	1.03	771	0.124	843	0.0162
412	0.175	484	1.27	556	4.72	628	4.05	700	1.00	772	0.120	844	0.0148
413	0.192	485	1.29	557	4.72	629	4.01	701	0.976	773	0.116	845	0.0150
414	0.209	486	1.31	558	4.74	630	3.97	702	0.950	774	0.113	846	0.0147
415	0.226	487	1.32	559	4.76	631	3.93	703	0.924	775	0.110	847	0.0151
416	0.251	488	1.35	560	4.77	632	3.88	704	0.897	776	0.107	848	0.0141
417	0.278	489	1.39	561	4.79	633	3.85	705	0.876	777	0.103	849	0.0145
418	0.306	490	1.43	562	4.81	634	3.80	706	0.851	778	0.100	850	0.0139
419	0.341	491	1.49	563	4.83	635	3.75	707	0.827	779	0.0967		
420	0.378	492	1.54	564	4.83	636	3.71	708	0.805	780	0.0944		
421	0.422	493	1.60	565	4.83	637	3.67	709	0.782	781	0.0917		



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## Photometric Indoor Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C82.77-2002

Prepared For  
Elemental LED Inc, DBA Diode LED  
Wes Buck  
Suite 211, 1195 Park Ave.  
Emeryville, CA 94608  
United States

Catalog Number  
BLAZE™ 12v LED Tape Light DI-12V-BL42-80XX  
Project Number  
10460077  
Test Number  
758924

Test Date

2014-09-22

Prepared By

Handwritten signature of Javier Caban in black ink.

Javier Caban, Technician

Approved By

Handwritten signature of Eric M. Gaudreau in black ink.

Eric Gaudreau, Engineering Project Handler

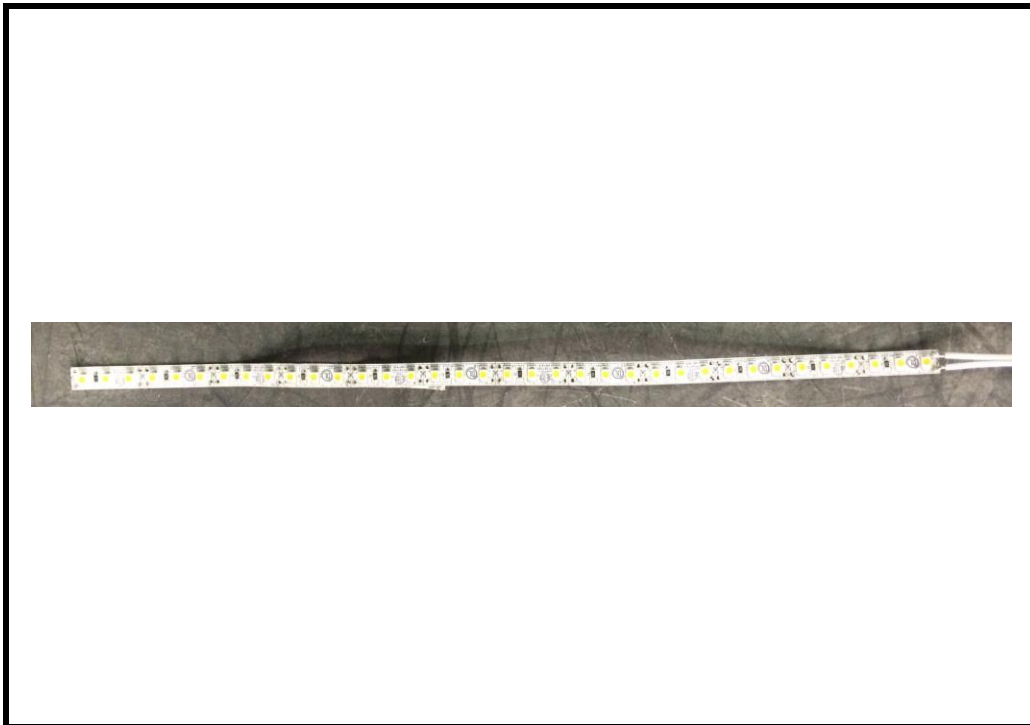
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Luminaire Description: LED strip  
Catalog Number: BLAZE™ 12v LED Tape Light DI-12V-BL42-80XX  
Lamp: 36 white LEDs  
Mounting: Surface  
Ballast/Driver: One Meanwell LPV-60-12

Luminaire

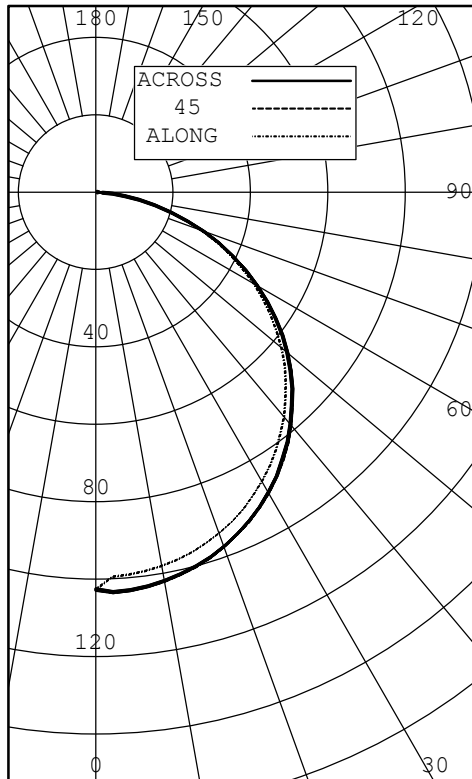


Test Conditions

Test Temperature:	24.8 °C
Voltage:	120.0 VAC
Current:	0.08307 A
Power:	4.303 W
Power Factor:	0.432
Frequency:	60 Hz
Current THD:	182 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	103	103	103	103	103	
5	99	102	103	103	103	10
10	98	101	102	102	102	
15	96	99	100	100	100	28
20	94	97	98	97	97	
25	90	93	94	94	94	43
30	86	89	90	89	89	
35	81	84	85	84	84	52
40	76	78	79	78	78	
45	70	72	72	72	72	55
50	63	65	65	65	65	
55	55	57	57	57	57	50
60	47	48	48	48	48	
65	38	39	39	39	39	39
70	29	30	30	30	30	
75	20	21	20	20	20	22
80	11	12	12	12	11	
85	5	5	5	5	5	6
90	0	1	1	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	81	26.54
0-40	133	43.73
0-60	239	78.36
0-90	304	100.00
40-90	171	56.27
60-90	66	21.64
90-180	0	0.00
0-180	304	100.00

EFFICACY (LUMENS PER WATT): 70.8

\*\*\* THIS IS AN ABSOLUTE TEST \*\*\*

LUMINOUS LENGTH: 12.000 INS  
 WIDTH: 0.375 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3  
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	33854	35230	35133
55	33058	34270	34209
65	31134	32184	32112
75	26483	27248	27119
85	18180	18622	17852

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA  
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	103	103	103	103	103	103	
2.5	100	102	104	103	104	103	
5.0	99	102	103	103	103	102	10
7.5	99	102	103	103	103	102	
10.0	98	101	102	102	102	101	
12.5	97	100	101	101	101	100	
15.0	96	99	100	100	100	99	28
17.5	95	98	99	99	99	98	
20.0	94	97	98	97	97	97	
22.5	92	95	96	96	96	95	
25.0	90	93	94	94	94	93	43
27.5	88	91	92	92	92	91	
30.0	86	89	90	89	89	89	
32.5	84	87	87	87	87	86	
35.0	81	84	85	84	84	84	52
37.5	79	81	82	81	81	81	
40.0	76	78	79	78	78	78	
42.5	73	75	75	75	75	75	
45.0	70	72	72	72	72	72	55
47.5	66	68	69	68	68	68	
50.0	63	65	65	65	65	64	
52.5	59	61	61	61	61	61	
55.0	55	57	57	57	57	57	50
57.5	51	53	53	53	53	52	
60.0	47	48	48	48	48	48	
62.5	43	44	44	44	44	44	
65.0	38	39	39	39	39	39	39
67.5	34	35	35	35	35	35	
70.0	29	30	30	30	30	30	
72.5	25	25	25	25	25	25	
75.0	20	21	20	20	20	20	22
77.5	16	16	16	16	16	16	
80.0	11	12	12	12	11	12	
82.5	8	8	8	8	8	8	
85.0	5	5	5	5	5	5	6
87.5	2	2	2	2	2	2	
90.0	0	1	1	0	0	1	





COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0	
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR	0	1.221	.221	.221	.22	1.191	.191	.191	.19	1.161	.161	.161	.16	1.111	.111	.111	.11	1.061	.061	.061	.06	1.021	.021	.021	.02	1.00
	1	1.121	.071	.030	.99	1.091	.051	.010	.97	1.071	.030	.990	.96	0.980	.950	.93	0.940	.920	.90	0.910	.890	.87	0.85			
	2	1.020	.950	.880	.82	1.000	.930	.860	.81	0.980	.910	.850	.80	0.870	.820	.78	0.840	.800	.76	0.810	.780	.74	0.72			
	3	0.940	.830	.750	.68	0.910	.810	.740	.68	0.890	.800	.730	.67	0.770	.710	.66	0.740	.690	.65	0.720	.680	.64	0.62			
	4	0.870	.740	.650	.59	0.840	.730	.650	.58	0.820	.720	.640	.58	0.690	.620	.57	0.670	.610	.56	0.650	.600	.56	0.53			
	5	0.800	.660	.570	.50	0.780	.650	.560	.50	0.750	.640	.560	.50	0.620	.550	.49	0.600	.530	.49	0.580	.530	.48	0.46			
	6	0.730	.590	.500	.44	0.710	.580	.500	.43	0.690	.570	.490	.43	0.550	.480	.43	0.540	.470	.42	0.520	.460	.42	0.40			
	7	0.670	.530	.440	.38	0.650	.520	.430	.38	0.640	.510	.430	.37	0.500	.420	.37	0.480	.410	.36	0.470	.410	.36	0.34			
	8	0.620	.480	.390	.33	0.610	.470	.390	.33	0.590	.460	.380	.33	0.450	.380	.33	0.440	.370	.32	0.430	.370	.32	0.30			
	9	0.580	.440	.350	.29	0.560	.430	.350	.29	0.550	.420	.340	.29	0.410	.340	.29	0.400	.330	.28	0.390	.330	.28	0.26			
	10	0.530	.400	.310	.26	0.520	.390	.310	.26	0.510	.380	.310	.26	0.370	.300	.25	0.360	.300	.25	0.360	.290	.25	0.23			

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS  
 BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.  
 LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD  
 THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.  
 BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST  
 LUMINOUS OPENING OF LUMINAIRE.



## Cone of Light

**Cone Of Light Tabulation**

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	6.45	5.13
6.00	2.87	7.69
8.00	1.61	10.3
10.0	1.03	12.8
12.0	0.717	15.4
14.0	0.527	17.9
16.0	0.403	20.5

**Cone of Light Plot**

