



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-BL63-80XX

Order Number
10460077
Test Number
758929

Test Date
2014-09-24

Prepared By

Javier Caban

Javier Caban, Technician

Approved By

Eric M. Gaudreau

Eric Gaudreau, Engineering Project Handler

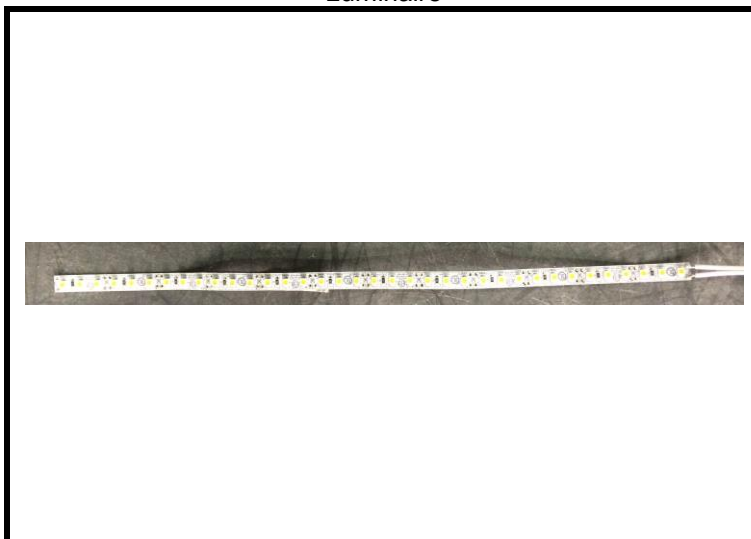
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UL Verification Services Inc.
7036 Snowdrift Road
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610-774-1300

Luminaire Description: LED strip
Catalog Number: BLAZE™ 12v LED Tape Light DI-12V-BL63-80XX
Lamp: 36 white LEDs
Mounting: Surface
Ballast/Driver: One Meanwell LPV-60-12

Luminaire



Summary of Results

Radiant Flux:	898.0 mW
Luminous Flux:	280.7 Lumens
Luminaire Efficacy:	68.6 Lumens/Watt
CCT:	6075 K
CRI (Ra):	82.0
Chromaticity (x):	0.3200
Chromaticity (y):	0.3377
Chromaticity (u):	0.1996
Chromaticity (v):	0.3160
Duv:	0.0036

Test Conditions

Test Temperature:	25.4 °C
Voltage:	120.0 VAC
Current:	0.08404 A
Power:	4.090 W
Power Factor:	0.405
Frequency:	60 Hz
Current THD:	189 %

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

Absorption correction was employed for this measurement.

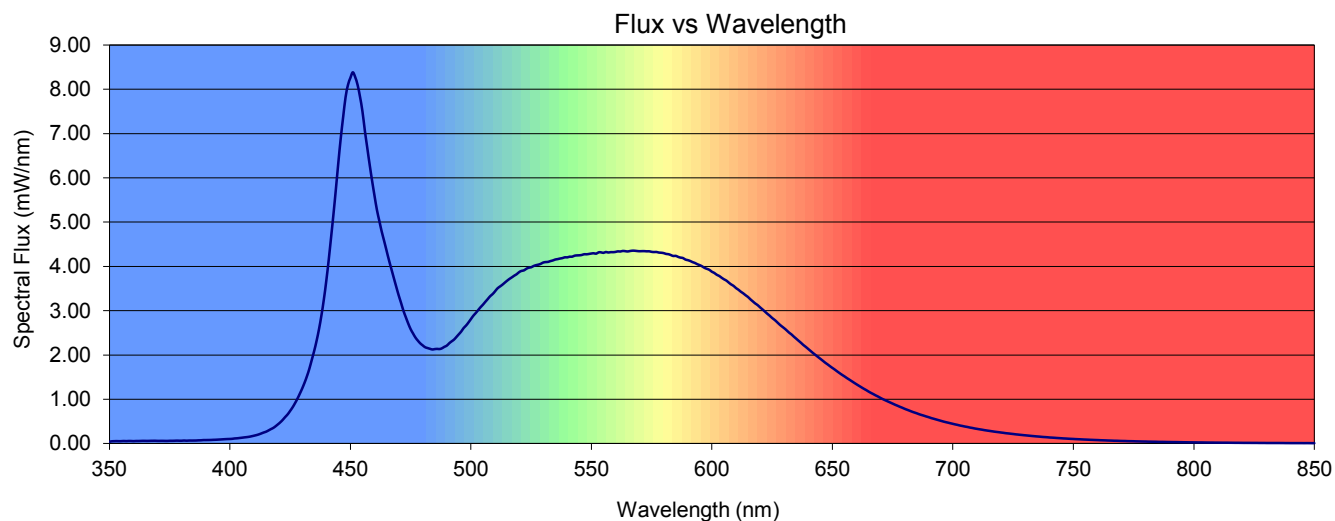
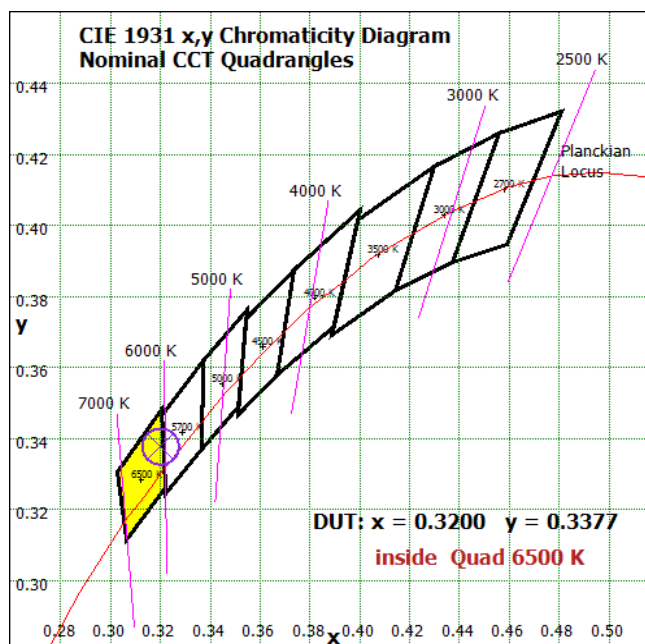
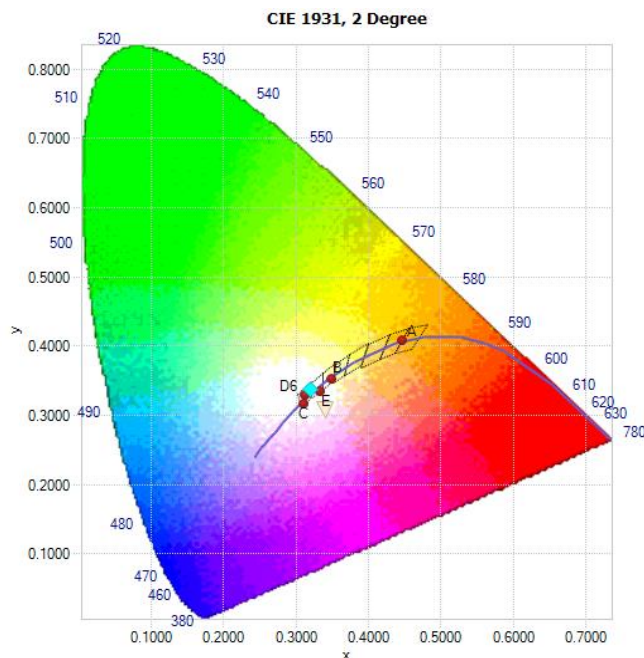


Chromaticity Coordinates

x	y	u	v	u'	v'	Duv
0.3200	0.3377	0.1996	0.3160	0.1996	0.4740	0.0036

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
82.0	79.8	87.2	91.1	81.2	80.5	81.4	87.5	67.6	1.9	68.6	79.8	57.4	82.0	95.3





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Spectral Power Distribution

λ (nm)	mW/nm	λ (nm)	mW/nm	λ (nm)	mW/nm	λ (nm)	mW/nm	λ (nm)	mW/nm	λ (nm)	mW/nm	λ (nm)	mW/nm
350	0.0406	422	0.539	494	2.41	566	4.35	638	2.22	710	0.331	782	0.0417
351	0.0500	423	0.602	495	2.47	567	4.36	639	2.18	711	0.322	783	0.0401
352	0.0522	424	0.660	496	2.53	568	4.35	640	2.13	712	0.313	784	0.0398
353	0.0541	425	0.737	497	2.61	569	4.35	641	2.09	713	0.303	785	0.0381
354	0.0521	426	0.816	498	2.66	570	4.34	642	2.04	714	0.295	786	0.0365
355	0.0538	427	0.909	499	2.73	571	4.34	643	2.00	715	0.287	787	0.0365
356	0.0567	428	1.01	500	2.81	572	4.34	644	1.96	716	0.278	788	0.0353
357	0.0540	429	1.12	501	2.89	573	4.34	645	1.91	717	0.270	789	0.0341
358	0.0571	430	1.24	502	2.95	574	4.34	646	1.87	718	0.262	790	0.0334
359	0.0565	431	1.38	503	3.01	575	4.33	647	1.83	719	0.256	791	0.0324
360	0.0535	432	1.52	504	3.08	576	4.32	648	1.79	720	0.248	792	0.0320
361	0.0567	433	1.69	505	3.14	577	4.33	649	1.75	721	0.241	793	0.0314
362	0.0567	434	1.89	506	3.20	578	4.31	650	1.71	722	0.233	794	0.0302
363	0.0586	435	2.10	507	3.26	579	4.31	651	1.67	723	0.228	795	0.0293
364	0.0602	436	2.32	508	3.33	580	4.30	652	1.63	724	0.221	796	0.0281
365	0.0594	437	2.59	509	3.37	581	4.28	653	1.59	725	0.215	797	0.0275
366	0.0589	438	2.90	510	3.44	582	4.28	654	1.55	726	0.208	798	0.0266
367	0.0609	439	3.26	511	3.50	583	4.26	655	1.52	727	0.202	799	0.0264
368	0.0615	440	3.68	512	3.54	584	4.23	656	1.48	728	0.196	800	0.0255
369	0.0622	441	4.14	513	3.58	585	4.24	657	1.44	729	0.191	801	0.0250
370	0.0593	442	4.66	514	3.63	586	4.22	658	1.41	730	0.185	802	0.0241
371	0.0597	443	5.19	515	3.68	587	4.20	659	1.37	731	0.180	803	0.0239
372	0.0605	444	5.75	516	3.72	588	4.19	660	1.34	732	0.175	804	0.0232
373	0.0592	445	6.35	517	3.75	589	4.16	661	1.30	733	0.169	805	0.0220
374	0.0582	446	6.89	518	3.79	590	4.14	662	1.27	734	0.164	806	0.0217
375	0.0615	447	7.37	519	3.82	591	4.12	663	1.24	735	0.159	807	0.0209
376	0.0616	448	7.82	520	3.87	592	4.10	664	1.21	736	0.155	808	0.0209
377	0.0629	449	8.10	521	3.90	593	4.08	665	1.17	737	0.150	809	0.0199
378	0.0652	450	8.26	522	3.91	594	4.05	666	1.14	738	0.146	810	0.0196
379	0.0632	451	8.38	523	3.95	595	4.03	667	1.12	739	0.142	811	0.0190
380	0.0633	452	8.28	524	3.97	596	4.00	668	1.09	740	0.137	812	0.0189
381	0.0674	453	8.10	525	3.98	597	3.97	669	1.06	741	0.133	813	0.0186
382	0.0639	454	7.83	526	4.01	598	3.94	670	1.03	742	0.130	814	0.0184
383	0.0671	455	7.50	527	4.03	599	3.92	671	1.00	743	0.126	815	0.0176
384	0.0670	456	7.07	528	4.04	600	3.88	672	0.976	744	0.122	816	0.0171
385	0.0672	457	6.68	529	4.06	601	3.85	673	0.951	745	0.119	817	0.0165
386	0.0682	458	6.30	530	4.09	602	3.81	674	0.926	746	0.115	818	0.0163
387	0.0717	459	5.94	531	4.10	603	3.79	675	0.902	747	0.112	819	0.0158
388	0.0727	460	5.60	532	4.10	604	3.75	676	0.877	748	0.108	820	0.0151
389	0.0777	461	5.28	533	4.12	605	3.71	677	0.854	749	0.106	821	0.0146
390	0.0779	462	5.03	534	4.13	606	3.68	678	0.830	750	0.103	822	0.0147
391	0.0792	463	4.79	535	4.15	607	3.64	679	0.808	751	0.0996	823	0.0145
392	0.0804	464	4.58	536	4.17	608	3.59	680	0.784	752	0.0971	824	0.0140
393	0.0829	465	4.36	537	4.18	609	3.56	681	0.763	753	0.0944	825	0.0138
394	0.0851	466	4.14	538	4.19	610	3.51	682	0.742	754	0.0915	826	0.0138
395	0.0879	467	3.94	539	4.21	611	3.47	683	0.720	755	0.0889	827	0.0129
396	0.0912	468	3.74	540	4.20	612	3.43	684	0.701	756	0.0869	828	0.0124
397	0.0945	469	3.55	541	4.22	613	3.39	685	0.683	757	0.0839	829	0.0126
398	0.0981	470	3.35	542	4.22	614	3.35	686	0.662	758	0.0818	830	0.0116
399	0.101	471	3.18	543	4.24	615	3.31	687	0.645	759	0.0795	831	0.0116
400	0.103	472	3.00	544	4.25	616	3.26	688	0.628	760	0.0776	832	0.0112
401	0.107	473	2.85	545	4.25	617	3.21	689	0.610	761	0.0749	833	0.0115
402	0.114	474	2.71	546	4.26	618	3.16	690	0.594	762	0.0726	834	0.0112
403	0.118	475	2.58	547	4.27	619	3.13	691	0.575	763	0.0710	835	0.0114
404	0.124	476	2.49	548	4.27	620	3.08	692	0.560	764	0.0689	836	0.0111
405	0.131	477	2.39	549	4.28	621	3.03	693	0.544	765	0.0668	837	0.0106
406	0.139	478	2.32	550	4.29	622	2.98	694	0.529	766	0.0651	838	0.00977
407	0.144	479	2.26	551	4.30	623	2.93	695	0.513	767	0.0629	839	0.00960
408	0.152	480	2.22	552	4.29	624	2.89	696	0.498	768	0.0618	840	0.00914
409	0.164	481	2.18	553	4.32	625	2.84	697	0.484	769	0.0593	841	0.00913
410	0.177	482	2.16	554	4.32	626	2.79	698	0.471	770	0.0579	842	0.00895
411	0.190	483	2.14	555	4.31	627	2.74	699	0.457	771	0.0568	843	0.00922
412	0.206	484	2.12	556	4.33	628	2.69	700	0.445	772	0.0551	844	0.00909
413	0.227	485	2.13	557	4.31	629	2.65	701	0.431	773	0.0529	845	0.00877
414	0.248	486	2.14	558	4.32	630	2.60	702	0.420	774	0.0523	846	0.00857
415	0.267	487	2.13	559	4.32	631	2.56	703	0.406	775	0.0509	847	0.00877
416	0.294	488	2.15	560	4.33	632	2.51	704	0.395	776	0.0490	848	0.00843
417	0.324	489	2.18	561	4.34	633	2.47	705	0.383	777	0.0477	849	0.00795
418	0.352	490	2.21	562	4.34	634	2.41	706	0.374	778	0.0461	850	0.00778
419	0.392	491	2.26	563	4.35	635	2.37	707	0.362	779	0.0450		
420	0.436	492	2.31	564	4.34	636	2.32	708	0.352	780	0.0444		
421	0.483	493	2.35	565	4.34	637	2.27	709	0.340	781	0.0422		



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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.
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United States

Catalog Number
BLAZE™ 12v LED Tape Light DI-12V-BL63-80XX
Project Number
10460077
Test Number
758928

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

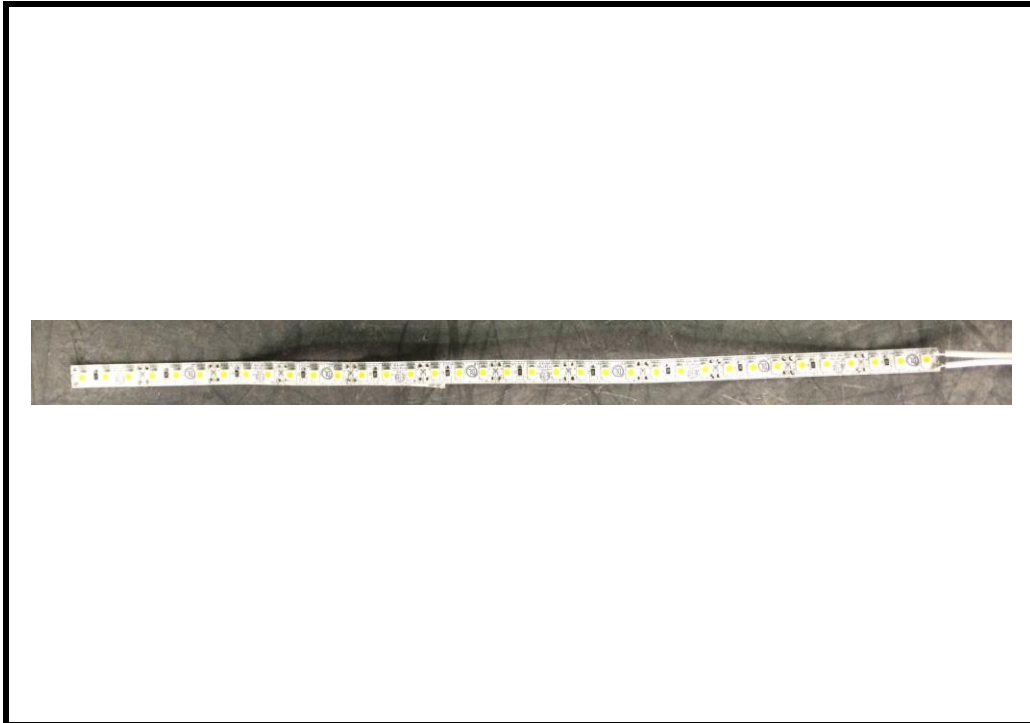
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Luminaire Description: LED strip
Catalog Number: BLAZE™ 12v LED Tape Light DI-12V-BL63-80XX
Lamp: 36 white LEDs
Mounting: Surface
Ballast/Driver: One Meanwell LPV-60-12

Luminaire

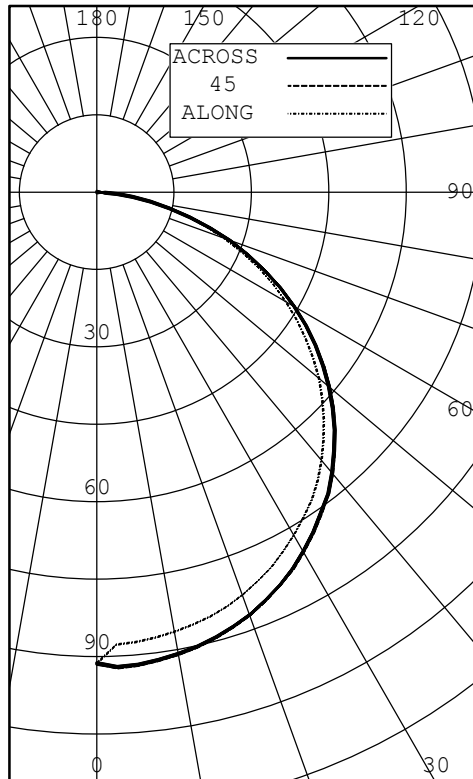


Test Conditions

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.08126 A
Power:	4.198 W
Power Factor:	0.430
Frequency:	60 Hz
Current THD:	181 %



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INTENSITY (CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	91	91	91	91	91	
5	88	92	92	92	92	9
10	87	90	91	91	91	
15	85	89	90	89	89	25
20	83	87	87	87	87	
25	80	84	84	84	84	38
30	77	80	80	80	80	
35	73	76	76	76	76	47
40	68	71	71	71	71	
45	62	65	65	65	65	50
50	56	59	59	59	59	
55	49	52	52	52	52	46
60	42	44	44	44	44	
65	35	36	36	36	36	35
70	26	28	28	28	28	
75	18	19	19	19	19	20
80	10	11	11	11	11	
85	4	4	4	4	4	5
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	72	26.22
0-40	119	43.33
0-60	215	78.10
0-90	276	100.00
40-90	156	56.67
60-90	60	21.90
90-180	0	0.00
0-180	276	100.00

EFFICACY (LUMENS PER WATT): 65.6

*** 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	30298	31905	31856
55	29695	31255	31225
65	28159	29567	29453
75	24088	25249	25048
85	15018	16839	16067

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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INTENSITY (CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	91	91	91	91	91	91	9
2.5	88	92	92	92	92	92	
5.0	88	92	92	92	92	91	
7.5	87	91	92	91	91	91	
10.0	87	90	91	91	91	90	25
12.5	86	90	90	90	90	90	
15.0	85	89	90	89	89	89	
17.5	84	88	88	88	88	88	
20.0	83	87	87	87	87	86	38
22.5	82	85	86	85	86	85	
25.0	80	84	84	84	84	83	
27.5	78	82	83	82	82	82	
30.0	77	80	80	80	80	80	47
32.5	75	78	78	78	78	78	
35.0	73	76	76	76	76	75	
37.5	70	74	74	74	74	73	
40.0	68	71	71	71	71	71	50
42.5	65	68	68	68	68	68	
45.0	62	65	65	65	65	65	
47.5	59	62	62	62	62	62	
50.0	56	59	59	59	59	58	46
52.5	53	55	56	55	55	55	
55.0	49	52	52	52	52	51	
57.5	46	48	48	48	48	48	
60.0	42	44	44	44	44	44	35
62.5	39	40	40	40	40	40	
65.0	35	36	36	36	36	36	
67.5	31	32	32	32	32	32	
70.0	26	28	28	28	28	27	20
72.5	22	23	23	23	23	23	
75.0	18	19	19	19	19	19	
77.5	14	15	15	15	15	15	
80.0	10	11	11	11	11	11	5
82.5	7	7	7	7	7	7	
85.0	4	4	4	4	4	4	
87.5	2	2	2	2	2	2	
90.0	0	0	0	0	0	0	



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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	1.221	1.221	1.22	1.191	1.191	1.191	1.19	1.161	1.161	1.161	1.16	1.111	1.111	1.11	1.061	1.061	1.06	1.021	1.021	1.02	1.00			
1	1.121	1.071	1.030	0.99	1.091	1.051	1.010	0.97	1.071	1.030	0.990	0.95	0.980	0.950	0.92	0.940	0.920	0.90	0.910	0.890	0.87	0.85			
2	1.020	0.940	0.880	0.81	1.000	0.920	0.860	0.80	0.980	0.900	0.840	0.79	0.870	0.820	0.78	0.840	0.800	0.76	0.810	0.770	0.74	0.72			
3	0.940	0.830	0.740	0.68	0.910	0.810	0.740	0.67	0.890	0.800	0.730	0.67	0.770	0.710	0.66	0.740	0.690	0.64	0.720	0.670	0.63	0.61			
4	0.860	0.740	0.650	0.58	0.840	0.730	0.640	0.58	0.820	0.710	0.640	0.57	0.690	0.620	0.57	0.670	0.610	0.56	0.640	0.590	0.55	0.53			
5	0.800	0.660	0.570	0.50	0.770	0.650	0.560	0.50	0.750	0.640	0.550	0.49	0.620	0.540	0.49	0.600	0.530	0.48	0.580	0.520	0.48	0.46			
6	0.730	0.590	0.500	0.43	0.710	0.580	0.490	0.43	0.690	0.570	0.490	0.43	0.550	0.480	0.42	0.530	0.470	0.42	0.520	0.460	0.41	0.40			
7	0.670	0.530	0.440	0.38	0.650	0.520	0.430	0.37	0.640	0.510	0.430	0.37	0.490	0.420	0.37	0.480	0.410	0.36	0.470	0.410	0.36	0.34			
8	0.620	0.480	0.390	0.33	0.600	0.470	0.390	0.33	0.590	0.460	0.380	0.32	0.450	0.370	0.32	0.440	0.370	0.32	0.420	0.360	0.32	0.30			
9	0.570	0.430	0.340	0.29	0.560	0.430	0.340	0.29	0.550	0.420	0.340	0.29	0.410	0.330	0.28	0.400	0.330	0.28	0.390	0.320	0.28	0.26			
10	0.530	0.390	0.310	0.25	0.520	0.390	0.310	0.25	0.510	0.380	0.310	0.25	0.370	0.300	0.25	0.360	0.290	0.25	0.350	0.290	0.25	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.



UL Verification Services Inc.
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Cone of Light

Cone Of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	5.74	5.17
6.00	2.55	7.76
8.00	1.43	10.3
10.0	0.918	12.9
12.0	0.637	15.5
14.0	0.468	18.1
16.0	0.359	20.7

Cone of Light Plot

