

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: E395855

Luminaire Tested: **H600-1636C**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: E395855  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H600-1636C  
Description: HALO RECESSED INC. CLEAR CONE, 30 DEG. TILT  
Light Source: 150R40SP, 1900 LUMENS  
Ballast/Driver: -

**Summary**

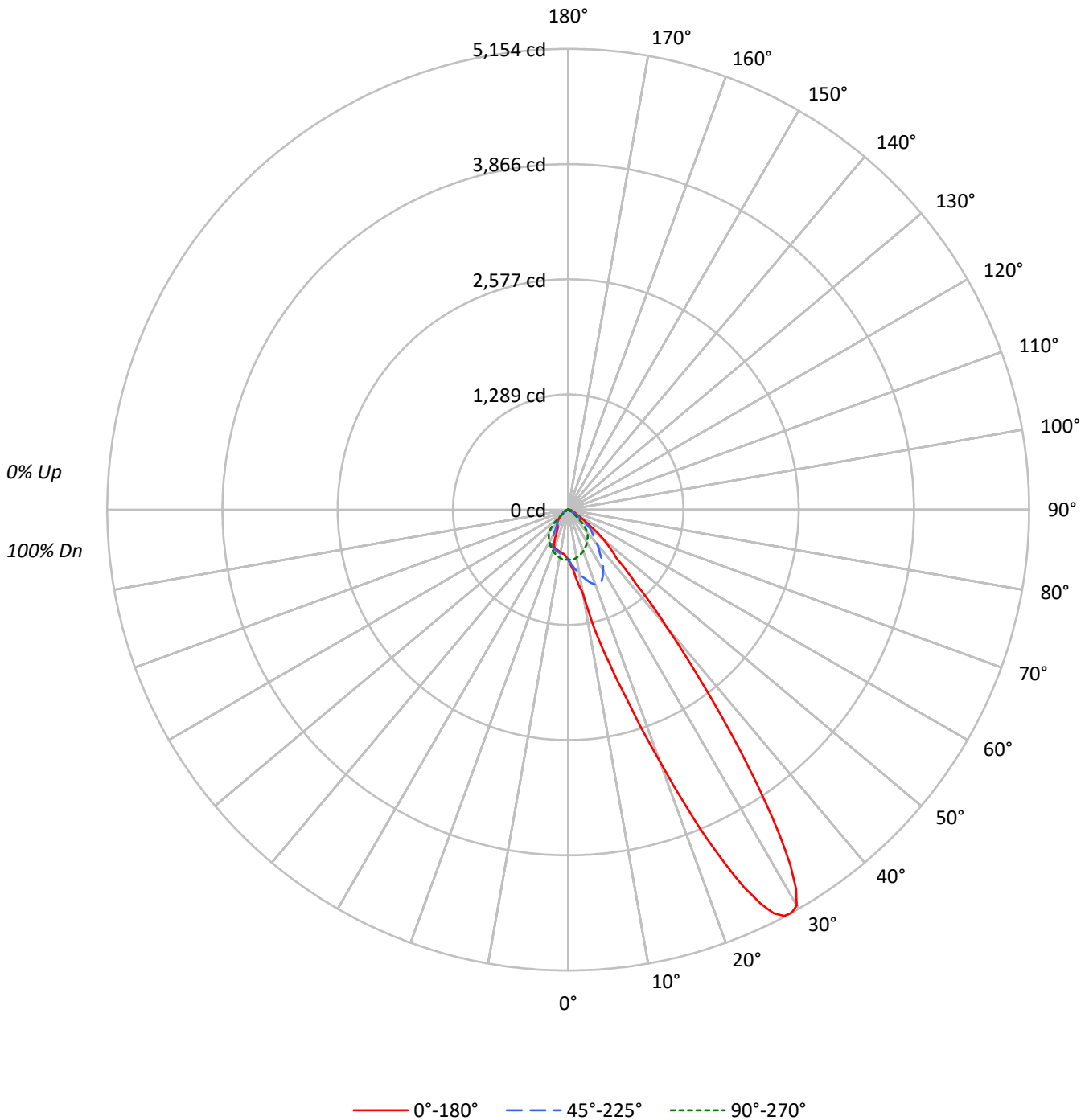
Lumens per Lamp: 1900 (1 lamp)  
Luminaire Lumens: 1637.4 lumens  
Efficiency: 86.2%  
Efficacy: 10.9 lumens/watt  
Spacing Criteria (0/90/45): 1.81 / 1.13 / 1.23  
Luminous Opening: (L: 0 ' x W: -0.52 ' x H: 0 '  
CIE Type: Direct

Input Watts (W): 150  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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	0
RCR																				
0	103	103	103	103	100	100	100	100	96	96	96		92	92	92		88	88	88	86
1	96	93	91	88	94	91	89	87	88	86	84		85	83	82		82	80	79	78
2	90	85	80	77	88	83	79	76	80	77	74		78	75	72		75	73	71	69
3	84	77	72	67	82	76	71	67	73	69	66		71	67	64		69	66	63	62
4	78	70	64	59	77	69	63	59	67	62	58		65	61	58		63	60	57	55
5	73	64	58	53	71	63	57	53	61	56	52		60	55	52		58	54	51	50
6	68	59	52	48	67	58	52	47	56	51	47		55	50	47		54	50	46	45
7	64	54	47	43	62	53	47	43	52	47	43		51	46	42		50	45	42	41
8	60	50	43	39	58	49	43	39	48	43	39		47	42	38		46	42	38	37
9	56	46	40	35	55	45	39	35	44	39	35		44	39	35		43	38	35	34
10	53	42	36	32	52	42	36	32	41	36	32		41	36	32		40	35	32	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	56.5	3.5	3.0
10°-20°	215.8	13.2	11.4
20°-30°	473.3	28.9	24.9
30°-40°	470.5	28.7	24.8
40°-50°	246.5	15.1	13.0
50°-60°	102.2	6.2	5.4
60°-70°	41.6	2.5	2.2
70°-80°	21.9	1.3	1.2
80°-90°	8.3	0.5	0.4
90°-100°	0.6	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	745.7	45.5	39.2
0°-40°	1216.2	74.3	64.0
0°-60°	1565.0	95.6	82.4
0°-90°	1636.7	100.0	86.1
90°-120°	0.6	0.0	0.0
90°-150°	0.6	0.0	0.0
90°-180°	1.0	0.1	0.1
0°-180°	1637.4	100.0	86.2

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	555	555	555	555	555	
5°	682	638	565	504	500	73
15°	1780	817	520	481	466	550
25°	4664	881	458	442	343	2089
35°	3526	636	379	227	210	2154
45°	764	390	246	136	154	692
55°	237	142	41	64	73	243
65°	83	48	21	34	42	82
75°	42	24	10	18	22	44
85°	18	8	3	6	8	17
90°	8	1	1	1	4	5
95°	0	0	0	0	0	2
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	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	20°	22.5°	25°	30°
0°	555	555	555	555	555	555	555	555	555	555	555
5°	682	687	684	680	676	679	678	676	674	676	666
10°	953	942	955	952	938	940	914	890	875	869	837
15°	1780	1738	1734	1673	1646	1574	1541	1428	1343	1299	1146
17.5°	2277	2277	2277	2205	2141	2057	2001	1805	1709	1574	1362
20°	2999	3014	2999	2941	2790	2676	2566	2237	2053	1904	1574
21°	3331	3386	3245	3171	3022	2944	2781	2431	2216	2036	1656
22°	3690	3652	3570	3446	3320	3178	3029	2615	2374	2162	1734
23°	4038	3981	3893	3744	3639	3416	3220	2785	2518	2268	1798
24°	4366	4288	4240	4049	3933	3644	3459	2889	2643	2345	1845
25°	4664	4553	4508	4332	4079	3875	3658	3041	2726	2439	1879
26°	4897	4834	4769	4569	4323	4063	3810	3153	2808	2500	1904
27°	5069	4991	4895	4739	4461	4198	3923	3222	2866	2529	1904
28°	5146	5104	4995	4817	4557	4268	3961	3245	2878	2529	1887
29°	5154	5128	5031	4838	4573	4273	3969	3220	2850	2487	1862
30°	5111	5039	4955	4779	4489	4206	3902	3163	2790	2447	1801
31°	4947	4853	4778	4618	4311	4061	3763	3067	2689	2349	1723
32°	4691	4619	4489	4374	4074	3888	3566	2899	2544	2223	1643
33°	4347	4335	4160	4055	3789	3621	3336	2687	2368	2078	1528
34°	3946	3903	3875	3690	3534	3344	3035	2493	2169	1912	1412
35°	3526	3542	3434	3371	3218	2973	2838	2225	1978	1719	1340
36°	3106	3109	3027	2955	2819	2680	2463	1997	1772	1583	1201
37°	2712	2706	2672	2569	2441	2344	2115	1765	1552	1415	1102
38°	2345	2336	2317	2210	2116	2013	1897	1543	1398	1254	991
39°	2017	2031	2002	1963	1837	1713	1631	1352	1230	1101	890
40°	1723	1774	1767	1658	1595	1457	1390	1167	1070	982	796
42.5°	1119	1154	1108	1114	1053	1031	968	860	794	735	644
45°	764	766	766	760	746	727	691	647	622	594	548
50°	508	504	500	500	489	481	479	456	444	431	401
55°	237	238	236	234	230	228	210	198	197	187	179
60°	112	117	117	113	111	106	107	104	101	97	91
70°	54	53	53	53	52	51	50	49	47	46	44
80°	29	29	29	27	28	28	26	26	25	24	22
90°	8	9	8	8	7	6	6	5	5	5	3
95°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	20°	22.5°	25°	30°
150°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	35°	40°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	555	555	555	555	555	555	555	555	555
5°	661	652	638	603	565	529	504	500	500
10°	785	766	732	625	544	515	495	487	485
15°	1020	917	817	612	520	501	481	470	466
17.5°	1157	994	860	592	507	493	474	466	466
20°	1308	1070	892	562	493	486	467	458	447
21°	1354	1094	898	550	487	482	462	449	436
22°	1384	1114	900	534	479	478	460	435	420
23°	1413	1122	898	518	473	474	456	420	397
24°	1434	1127	892	503	467	469	450	397	371
25°	1446	1121	881	487	458	465	442	374	343
26°	1442	1112	865	474	451	461	426	350	306
27°	1431	1091	848	463	444	457	411	316	277
28°	1405	1068	825	452	435	453	390	286	259
29°	1373	1037	800	441	426	447	369	261	245
30°	1324	1004	783	434	418	439	341	246	231
31°	1266	966	758	425	410	429	312	234	224
32°	1196	919	730	417	401	419	283	226	219
33°	1142	873	699	409	395	403	260	220	216
34°	1068	833	667	403	387	387	245	216	213
35°	1010	781	636	394	379	361	227	211	210
36°	930	737	607	385	370	331	214	207	208
37°	856	705	581	378	361	300	204	202	204
38°	787	661	560	370	351	267	197	199	200
39°	727	619	531	360	340	235	188	194	196
40°	678	581	504	351	329	204	183	189	190
42.5°	575	506	436	328	292	151	159	170	172
45°	497	439	390	309	246	115	136	148	154
50°	368	343	314	215	117	72	95	104	108
55°	167	156	142	63	41	46	64	71	73
60°	80	72	62	35	28	32	43	52	54
70°	39	36	33	19	14	18	26	29	31
80°	20	18	16	7	5	6	10	12	13
90°	2	1	1	1	1	1	1	3	4
95°	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	35°	40°	45°	67.5°	90°	112.5°	135°	157.5°	180°
150°	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)