

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: E395558

Luminaire Tested: **L1738/L210**

Issue Date: 3/3/2020



Test Information

Test Method: LM-46-04
Report Number: E395558
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: L1738/L210
Description: HALO TRAC - GIMBAL RING, LINEAR SPREAD LENS
Light Source: 150PAR38SP, 1740 LUMENS
Ballast/Driver: -

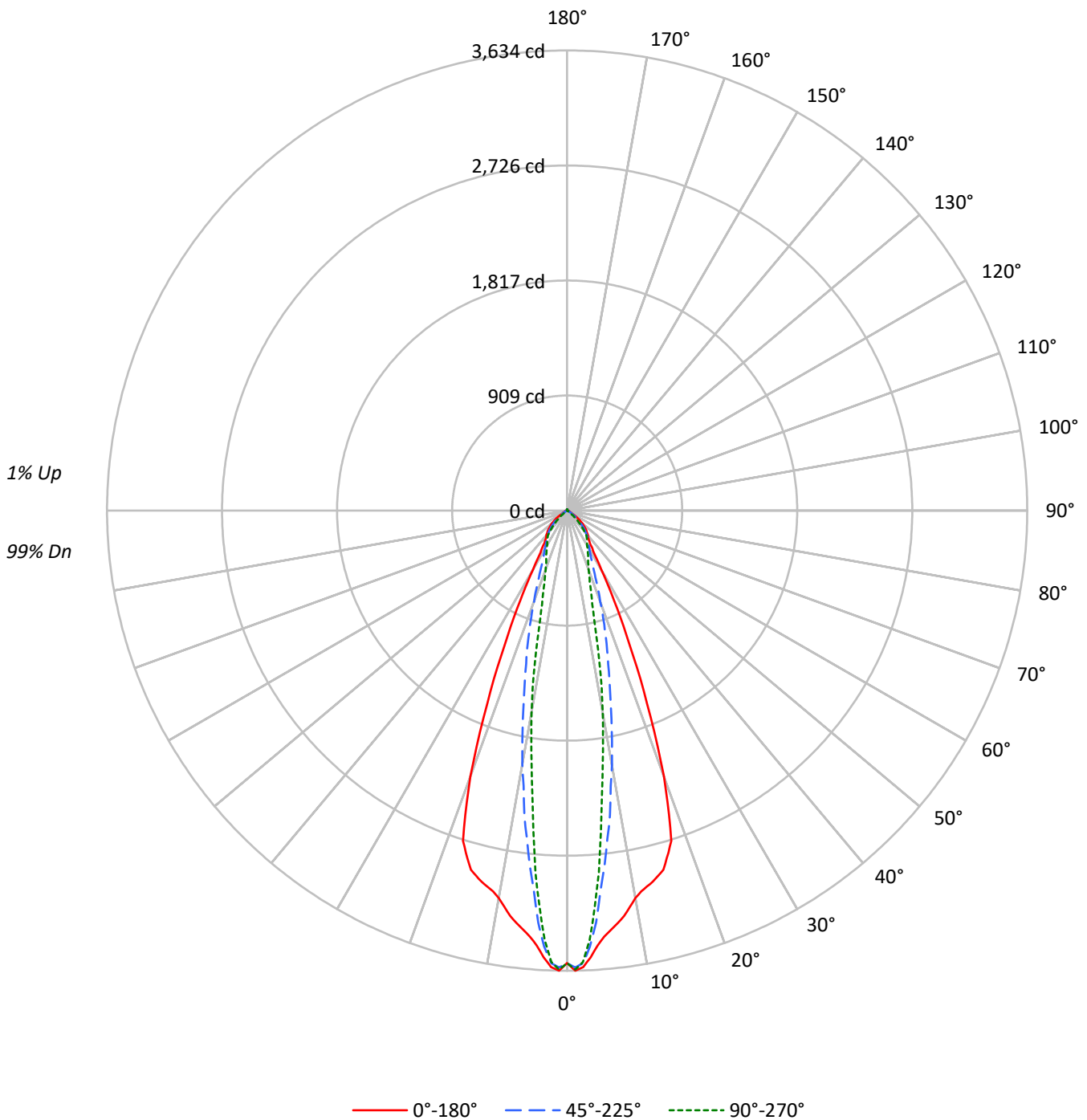
Summary

Lumens per Lamp: 1740 (1 lamp)
Luminaire Lumens: 1407.7 lumens
Efficiency: 80.9%
Efficacy: 9.4 lumens/watt
Spacing Criteria (0/90/45): 0.74 / 0.31 / 0.42
Luminous Opening: Point Source (0' x 0' x 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			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	96	96	96	96	94	94	94	94	89	89	89	85	85	85	82	82	82	80	80	80
1	92	89	87	85	89	87	86	84	84	82	81	81	80	79	78	77	76	75	75	75
2	87	83	80	77	85	82	79	76	79	76	74	76	74	73	74	72	71	69	69	69
3	83	78	74	70	81	76	73	70	74	71	69	72	69	67	70	68	66	65	65	65
4	79	73	68	65	77	72	68	65	70	66	64	68	65	63	67	64	62	61	61	61
5	75	68	64	60	74	68	63	60	66	62	59	65	61	59	63	60	58	57	57	57
6	72	65	60	57	70	64	59	56	63	59	56	61	58	55	60	57	55	54	54	54
7	68	61	56	53	67	61	56	53	59	56	53	58	55	52	57	54	52	51	51	51
8	65	58	53	50	64	58	53	50	57	53	50	56	52	50	55	52	49	48	48	48
9	63	55	51	48	62	55	51	48	54	50	47	53	50	47	53	49	47	46	46	46
10	60	53	48	45	59	52	48	45	52	48	45	51	47	45	50	47	45	44	44	44

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
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°	263.9	18.7	15.2
10°-20°	425.7	30.2	24.5
20°-30°	306.6	21.8	17.6
30°-40°	188.7	13.4	10.8
40°-50°	127.1	9.0	7.3
50°-60°	51.7	3.7	3.0
60°-70°	14.2	1.0	0.8
70°-80°	6.7	0.5	0.4
80°-90°	4.2	0.3	0.2
90°-100°	2.5	0.2	0.1
100°-110°	1.7	0.1	0.1
110°-120°	1.6	0.1	0.1
120°-130°	2.0	0.1	0.1
130°-140°	2.5	0.2	0.1
140°-150°	2.8	0.2	0.2
150°-160°	2.9	0.2	0.2
160°-170°	2.3	0.2	0.1
170°-180°	0.4	0.0	0.0
0°-30°	996.2	70.8	57.3
0°-40°	1185.0	84.2	68.1
0°-60°	1363.8	96.9	78.4
0°-90°	1389.0	98.7	79.8
90°-120°	5.8	0.4	0.3
90°-150°	13.1	0.9	0.8
90°-180°	19.0	1.3	1.1
0°-180°	1407.7	100.0	80.9

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3573	3573	3573	3573	3573	
5°	3376	3017	2867	3017	3376	315
15°	2937	1253	765	1253	2937	794
25°	1159	471	390	471	1159	555
35°	314	279	271	279	314	213
45°	207	169	122	169	207	159
55°	93	56	12	56	93	85
65°	23	10	6	10	23	25
75°	11	5	4	5	11	12
85°	7	3	3	3	7	6
90°	5	2	2	2	5	3
95°	4	2	2	2	4	3
105°	2	1	1	1	2	3
115°	3	1	1	1	3	3
125°	4	2	2	2	4	4
135°	5	3	2	3	5	4
145°	6	4	4	4	6	4
155°	8	6	5	6	8	4
165°	10	9	7	9	10	3
175°	11	10	8	10	11	1
180°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	22.5°	25°	35°	45°	55°	65°	67.5°	75°
0°	3573	3573	3573	3573	3573	3573	3573	3573	3573	3573	3573
1°	3634	3628	3621	3646	3644	3624	3609	3608	3623	3622	3619
2°	3607	3589	3597	3597	3605	3579	3577	3562	3563	3572	3578
3°	3533	3515	3515	3503	3509	3456	3449	3419	3405	3412	3384
4°	3443	3447	3424	3418	3392	3309	3263	3222	3174	3173	3132
5°	3376	3376	3336	3313	3264	3159	3017	2973	2895	2888	2843
6°	3327	3333	3256	3198	3152	2997	2818	2694	2592	2586	2559
7°	3281	3275	3182	3079	3034	2823	2610	2435	2321	2308	2258
8°	3234	3222	3092	2948	2894	2647	2430	2218	2076	2077	2017
9°	3168	3153	3006	2827	2749	2462	2203	2000	1866	1863	1797
10°	3108	3085	2910	2683	2602	2271	2034	1804	1672	1670	1621
11°	3063	3027	2806	2563	2455	2104	1853	1637	1495	1484	1430
12°	3035	2985	2727	2427	2312	1946	1682	1480	1341	1309	1262
13°	3008	2952	2661	2310	2182	1795	1522	1335	1165	1134	1072
14°	2972	2926	2586	2210	2074	1686	1376	1174	1008	988	910
15°	2937	2887	2508	2105	1966	1569	1253	1028	884	863	795
17.5°	2735	2679	2264	1848	1738	1310	991	762	667	649	610
20°	2231	2230	1875	1550	1453	1074	765	601	541	535	512
22.5°	1647	1654	1476	1225	1148	855	596	499	456	452	444
25°	1159	1158	1069	937	886	648	471	439	406	399	398
27.5°	801	777	734	682	660	499	401	387	373	369	361
30°	537	530	511	494	489	408	353	344	347	338	328
32.5°	392	394	388	377	376	338	313	308	312	313	302
35°	314	318	318	317	318	290	279	289	288	286	282
37.5°	274	275	282	283	279	266	261	252	262	264	259
40°	255	252	244	258	254	239	231	215	222	228	220
45°	207	201	188	186	187	190	169	149	138	137	129
50°	155	156	146	146	139	126	108	82	65	59	53
55°	93	95	92	89	82	70	56	35	22	19	14
60°	41	41	47	41	39	32	23	13	9	9	8
65°	23	23	23	20	18	13	10	7	6	6	6
70°	14	14	13	12	11	9	6	5	5	5	5
75°	11	11	10	9	8	6	5	4	4	4	4
80°	9	9	7	6	6	5	4	3	3	3	3
85°	7	6	6	5	4	4	3	3	3	3	3
90°	5	5	4	4	3	3	2	2	2	2	2
95°	4	3	3	3	2	2	2	2	2	2	2
105°	2	2	2	2	1	1	1	1	1	1	1
115°	3	2	2	2	2	2	1	1	1	1	1
125°	4	4	3	3	2	2	2	2	1	1	2
135°	5	5	4	4	4	4	3	2	2	2	2
145°	6	6	6	6	5	5	4	3	3	3	3
155°	8	7	7	7	7	7	6	5	5	5	5
165°	10	10	10	10	10	9	9	8	7	7	7
175°	11	11	11	11	11	10	10	9	9	8	8



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	22.5°	25°	35°	45°	55°	65°	67.5°	75°
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	85°	90°	95°	105°	112.5°	115°	125°	135°	145°	155°	157.5°
0°	3573	3573	3573	3573	3573	3573	3573	3573	3573	3573	3573
1°	3617	3625	3617	3619	3622	3623	3608	3609	3624	3644	3646
2°	3570	3567	3570	3578	3572	3563	3562	3577	3579	3605	3597
3°	3390	3396	3390	3384	3412	3405	3419	3449	3456	3509	3503
4°	3150	3134	3150	3132	3173	3174	3222	3263	3309	3392	3418
5°	2856	2867	2856	2843	2888	2895	2973	3017	3159	3264	3313
6°	2539	2545	2539	2559	2586	2592	2694	2818	2997	3152	3198
7°	2256	2257	2256	2258	2308	2321	2435	2610	2823	3034	3079
8°	1999	2015	1999	2017	2077	2076	2218	2430	2647	2894	2948
9°	1783	1809	1783	1797	1863	1866	2000	2203	2462	2749	2827
10°	1606	1620	1606	1621	1670	1672	1804	2034	2271	2602	2683
11°	1432	1429	1432	1430	1484	1495	1637	1853	2104	2455	2563
12°	1228	1225	1228	1262	1309	1341	1480	1682	1946	2312	2427
13°	1053	1030	1053	1072	1134	1165	1335	1522	1795	2182	2310
14°	896	876	896	910	988	1008	1174	1376	1686	2074	2210
15°	765	765	765	795	863	884	1028	1253	1569	1966	2105
17.5°	590	591	590	610	649	667	762	991	1310	1738	1848
20°	495	495	495	512	535	541	601	765	1074	1453	1550
22.5°	428	431	428	444	452	456	499	596	855	1148	1225
25°	384	390	384	398	399	406	439	471	648	886	937
27.5°	348	351	348	361	369	373	387	401	499	660	682
30°	318	314	318	328	338	347	344	353	408	489	494
32.5°	295	291	295	302	313	312	308	313	338	376	377
35°	275	271	275	282	286	288	289	279	290	318	317
37.5°	249	251	249	259	264	262	252	261	266	279	283
40°	210	207	210	220	228	222	215	231	239	254	258
45°	122	122	122	129	137	138	149	169	190	187	186
50°	42	41	42	53	59	65	82	108	126	139	146
55°	12	12	12	14	19	22	35	56	70	82	89
60°	8	7	8	8	9	9	13	23	32	39	41
65°	6	6	6	6	6	6	7	10	13	18	20
70°	5	5	5	5	5	5	5	6	9	11	12
75°	4	4	4	4	4	4	4	5	6	8	9
80°	4	4	4	3	3	3	3	4	5	6	6
85°	3	3	3	3	3	3	3	3	4	4	5
90°	2	2	2	2	2	2	2	2	3	3	4
95°	2	2	2	2	2	2	2	2	2	2	3
105°	1	1	1	1	1	1	1	1	1	1	2
115°	1	1	1	1	1	1	1	1	2	2	2
125°	2	2	2	2	1	1	2	2	2	2	3
135°	2	2	2	2	2	2	2	3	4	4	4
145°	3	4	3	3	3	3	3	4	5	5	6
155°	5	5	5	5	5	5	5	6	7	7	7
165°	7	7	7	7	7	7	8	9	9	10	10
175°	8	8	8	8	8	9	9	10	10	11	11



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CANDELA DISTRIBUTION (continued):

180°	85°	90°	95°	105°	112.5°	115°	125°	135°	145°	155°	157.5°
	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	175°	180°
0°	3573	3573	3573
1°	3621	3628	3634
2°	3597	3589	3607
3°	3515	3515	3533
4°	3424	3447	3443
5°	3336	3376	3376
6°	3256	3333	3327
7°	3182	3275	3281
8°	3092	3222	3234
9°	3006	3153	3168
10°	2910	3085	3108
11°	2806	3027	3063
12°	2727	2985	3035
13°	2661	2952	3008
14°	2586	2926	2972
15°	2508	2887	2937
17.5°	2264	2679	2735
20°	1875	2230	2231
22.5°	1476	1654	1647
25°	1069	1158	1159
27.5°	734	777	801
30°	511	530	537
32.5°	388	394	392
35°	318	318	314
37.5°	282	275	274
40°	244	252	255
45°	188	201	207
50°	146	156	155
55°	92	95	93
60°	47	41	41
65°	23	23	23
70°	13	14	14
75°	10	11	11
80°	7	9	9
85°	6	6	7
90°	4	5	5
95°	3	3	4
105°	2	2	2
115°	2	2	3
125°	3	4	4
135°	4	5	5
145°	6	6	6
155°	7	7	8
165°	10	10	10
175°	11	11	11



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CANDELA DISTRIBUTION (continued):

	165°	175°	180°
180°	0	0	0

(END OF REPORT)