

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P21684_R2

Luminaire Tested: **PD8V120-80VWWC_150A21INC**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: P21684_R2
Test Lab: INNOVATION CENTER P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PD8V120-80VWWC_150A21INC
Description: ***THIS IS A REVISION OF P21684 TO UPDATE BALLAST AND LAMP
LUMENS INFORMATION***HALO 8 INCH RECESSED INCANDESCENT WALL
WASH DOWNLIGHT FIXTURE IN "A" POSITION , VERTICAL LAMP,
SPECULAR CLEAR TRIM
Light Source: (1) MEDIUM BASE INSIDE FROSTED A21 INCANDESCENT FIXTURE
150A21 150 WATTS
Ballast/Driver: CHROMA IN0061
CHROMA IN0061

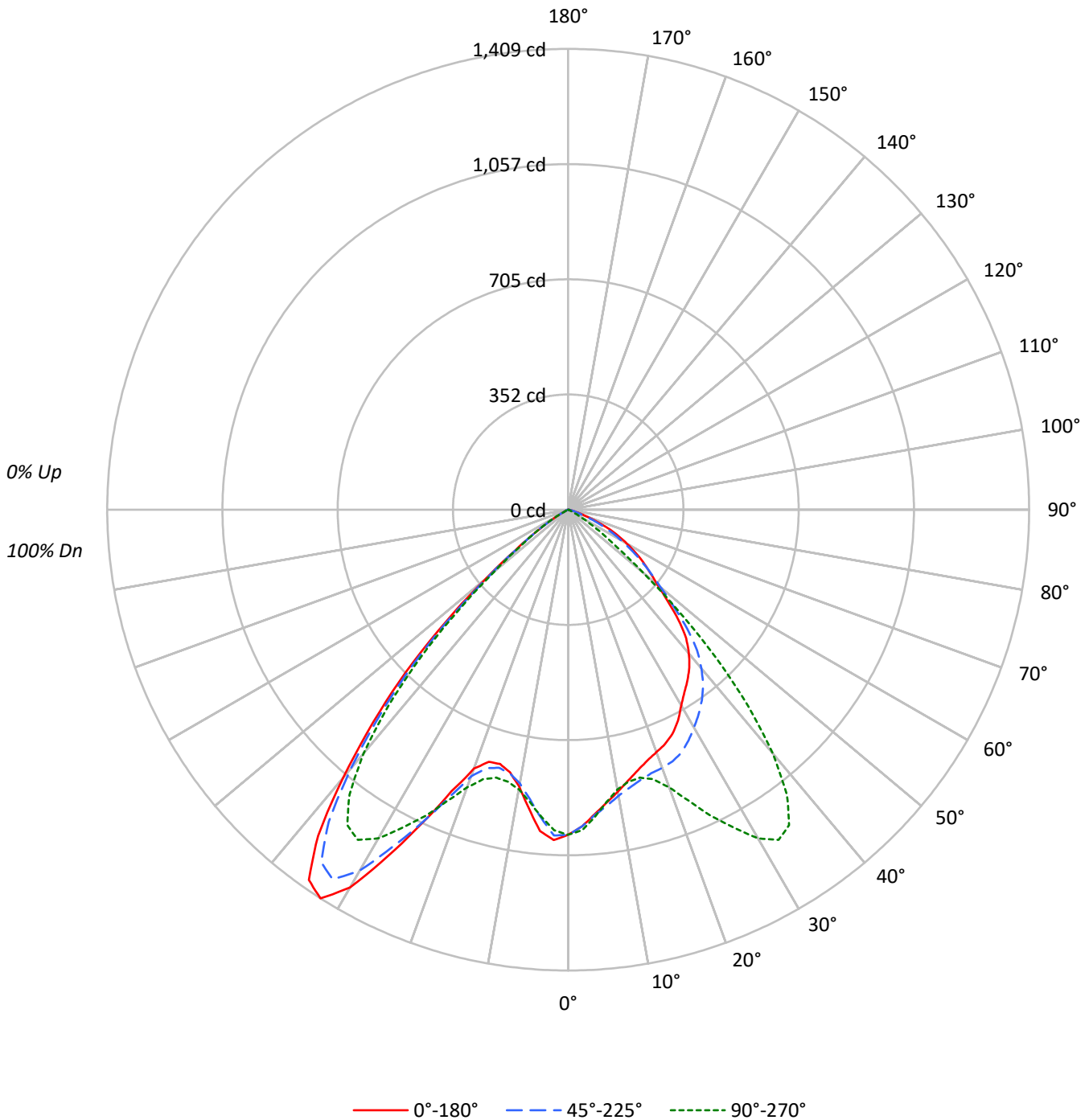
Summary

Lumens per Lamp: 2780 (1 lamp)
Luminaire Lumens: 2090.8 lumens
Efficiency: 75.2%
Efficacy: 14.1 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.6 / 1.35
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 148.8
Input Voltage (V): NR
Input Current (Ain): 1.2384
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 1 HR
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	50	30	10	0	
RCR																						
0	90	90	90	90	87	87	87	87	84	84	84	80	80	80	77	77	77	75				
1	84	82	79	77	82	80	78	76	77	75	73	74	73	71	71	70	69	68				
2	78	74	70	67	77	72	69	66	70	67	64	68	65	63	65	63	62	60				
3	73	67	62	58	71	66	61	57	63	60	56	61	58	56	60	57	55	53				
4	68	60	55	51	66	59	54	51	58	53	50	56	52	49	55	51	49	47				
5	63	55	49	45	61	54	49	45	53	48	44	51	47	44	50	46	43	42				
6	58	50	44	40	57	49	44	40	48	43	40	47	42	39	46	42	39	38				
7	54	46	40	36	53	45	40	36	44	39	35	43	38	35	42	38	35	34				
8	51	42	36	32	50	41	36	32	40	35	32	39	35	32	39	35	32	30				
9	48	38	33	29	47	38	33	29	37	32	29	36	32	29	36	32	29	27				
10	45	35	30	26	44	35	30	26	34	30	26	34	29	26	33	29	26	25				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	27151	27151	27151
5°	25213	25429	26617
10°	23524	23336	23121
15°	22231	22879	21718
20°	21527	24637	22973
25°	20995	28726	29421
30°	19746	33147	38120
35°	18837	34860	40932
40°	17785	30117	33153
45°	15619	20858	22888
50°	12424	10289	11549
55°	10611	4699	4699
60°	8624	1666	1375
65°	6251	373	420
70°	2994	267	321
75°	1453	189	253
80°	623	156	156
85°	308	103	103



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	87.8	4.2	3.2	0°	994	994	994	994	994	
10°-20°	239.1	11.4	8.6	5°	934	937	942	946	986	87
20°-30°	443.6	21.2	16.0	15°	824	855	848	817	805	233
30°-40°	636.4	30.4	22.9	25°	755	819	1033	1055	1058	345
40°-50°	457.1	21.9	16.4	35°	636	712	1177	1316	1382	397
50°-60°	165.7	7.9	6.0	45°	477	515	637	671	699	363
60°-70°	48.9	2.3	1.8	55°	280	271	124	125	124	250
70°-80°	10.6	0.5	0.4	65°	134	112	8	8	9	130
80°-90°	1.6	0.1	0.1	75°	23	17	3	3	4	28
90°-100°	0.0	0.0	0.0	85°	3	2	1	1	1	4
100°-110°	0.0	0.0	0.0	90°	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°	770.5	36.9	27.7							
0°-40°	1406.9	67.3	50.6							
0°-60°	2029.8	97.1	73.0							
0°-90°	2090.8	100.0	75.2							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	2090.8	100.0	75.2							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	994	994	994	994	994	994	994	994	994	994	994
2.5°	969	964	964	965	965	965	965	967	968	969	971
5°	934	929	929	930	931	931	932	934	935	937	939
7.5°	903	899	899	900	901	903	904	907	909	912	914
10°	875	871	871	873	874	876	879	882	885	888	892
12.5°	848	843	844	845	847	850	854	860	865	870	875
15°	824	819	820	821	824	827	834	841	848	855	862
17.5°	804	799	799	801	804	809	818	827	836	845	855
20°	789	784	783	784	787	794	804	815	827	840	853
22.5°	775	769	767	766	768	775	788	801	816	833	852
25°	755	749	746	742	742	748	763	780	798	819	844
27.5°	727	721	718	712	708	713	732	751	771	796	824
30°	691	686	685	679	674	676	697	720	743	769	800
32.5°	661	657	657	652	647	647	668	693	715	742	775
35°	636	631	630	627	622	623	640	666	687	712	745
37.5°	608	604	602	599	595	596	610	633	653	677	708
40°	574	569	568	564	561	562	574	593	613	634	661
42.5°	534	530	528	524	521	523	533	548	565	583	604
45°	477	474	471	468	466	467	475	488	499	515	531
47.5°	410	408	406	403	401	401	408	420	428	436	444
50°	355	352	351	348	345	345	348	358	365	368	367
52.5°	315	313	312	309	306	303	304	310	316	317	312
55°	280	277	276	274	271	268	266	268	272	271	265
57.5°	243	241	239	238	235	232	230	230	230	228	220
60°	207	205	204	202	200	197	194	193	191	186	176
62.5°	172	170	169	167	165	163	159	157	154	149	138
65°	134	132	131	130	128	125	122	119	116	112	103
67.5°	92	91	90	89	87	85	82	80	77	74	68
70°	56	55	55	54	53	52	50	49	47	45	41
72.5°	37	36	36	35	35	34	33	32	30	28	26
75°	23	23	22	22	22	21	20	19	18	17	16
77.5°	13	13	13	13	12	12	11	11	10	10	9
80°	8	7	7	7	7	7	7	6	6	6	5
82.5°	5	4	4	4	4	4	4	4	4	4	3
85°	3	3	3	3	3	3	3	3	2	2	2
87.5°	2	2	2	2	2	2	2	2	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	994	994	994	994	994	994	994	994	994	994	994
2.5°	973	974	975	976	977	978	979	981	982	985	986
5°	941	942	943	943	944	943	943	942	942	942	941
7.5°	915	916	916	915	913	910	905	901	897	893	890
10°	894	895	895	893	888	882	875	868	863	859	855
12.5°	879	881	881	879	874	866	858	852	847	843	839
15°	868	873	875	873	868	860	854	848	844	841	836
17.5°	865	874	880	880	876	872	867	864	861	858	855
20°	868	883	896	903	904	904	904	903	902	901	899
22.5°	873	897	920	936	947	954	959	963	966	968	968
25°	872	907	941	969	992	1010	1023	1033	1042	1048	1052
27.5°	859	904	952	993	1029	1056	1079	1095	1109	1121	1132
30°	842	898	962	1022	1071	1107	1137	1160	1180	1196	1213
32.5°	819	882	958	1029	1086	1131	1166	1197	1220	1240	1258
35°	790	854	930	1006	1064	1110	1148	1177	1200	1221	1239
37.5°	749	807	876	944	998	1040	1072	1098	1119	1136	1150
40°	695	743	796	848	891	926	951	972	989	1001	1008
42.5°	631	665	697	726	755	780	797	813	826	833	838
45°	549	570	580	590	603	616	626	637	647	653	657
47.5°	454	461	451	439	435	436	442	452	460	466	470
50°	364	355	326	295	279	276	284	294	300	305	307
52.5°	300	272	235	195	176	173	179	186	190	193	194
55°	252	227	182	140	119	116	121	124	125	125	125
57.5°	205	181	138	98	79	76	76	77	76	76	75
60°	160	136	99	65	47	43	41	40	39	39	38
62.5°	121	97	64	36	21	17	15	15	14	14	14
65°	89	68	43	22	13	10	9	8	8	8	8
67.5°	59	45	28	15	10	8	7	6	6	6	6
70°	35	27	18	11	8	6	5	5	5	5	5
72.5°	22	17	12	8	6	5	4	4	4	4	4
75°	13	10	8	6	4	4	3	3	3	3	3
77.5°	8	6	5	4	3	3	3	2	2	2	2
80°	5	4	3	3	2	2	2	2	2	2	2
82.5°	3	3	2	2	2	1	1	1	1	1	1
85°	2	2	1	1	1	1	1	1	1	1	1
87.5°	1	1	1	1	1	1	1	1	1	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	994	994	994	994	994	994	994	994	994	994	994
2.5°	988	989	991	993	995	997	998	1001	1003	1006	1007
5°	940	939	940	941	943	946	948	953	958	964	969
7.5°	888	887	887	888	890	893	896	900	903	907	911
10°	852	850	849	848	849	850	851	852	854	856	856
12.5°	835	832	829	827	826	825	823	823	822	822	821
15°	833	829	826	823	819	817	813	811	808	807	806
17.5°	851	847	843	838	833	828	823	819	815	812	810
20°	895	891	885	879	872	867	862	856	852	848	846
22.5°	968	966	961	958	953	951	947	943	940	937	936
25°	1055	1056	1055	1055	1055	1055	1055	1054	1054	1055	1057
27.5°	1138	1143	1147	1151	1158	1162	1167	1172	1177	1180	1184
30°	1225	1233	1240	1251	1264	1274	1283	1293	1304	1312	1317
32.5°	1272	1284	1295	1308	1324	1340	1351	1365	1376	1387	1393
35°	1254	1267	1279	1291	1304	1316	1328	1342	1352	1362	1368
37.5°	1161	1169	1177	1185	1195	1203	1212	1223	1230	1238	1242
40°	1013	1016	1018	1022	1026	1033	1037	1044	1049	1055	1059
42.5°	840	839	842	842	846	852	856	862	865	871	873
45°	660	660	661	662	667	671	674	681	684	689	692
47.5°	472	471	473	475	479	483	486	491	494	499	501
50°	308	308	311	312	314	317	320	323	323	326	327
52.5°	193	194	195	196	197	198	200	200	201	203	203
55°	124	123	124	124	124	125	124	125	124	125	124
57.5°	74	72	72	72	71	71	71	71	70	70	70
60°	36	35	35	34	34	34	34	34	33	33	33
62.5°	13	12	12	12	12	12	13	13	13	13	13
65°	7	7	7	8	8	8	8	8	9	9	9
67.5°	6	6	6	6	6	6	6	7	7	7	7
70°	5	5	5	5	5	5	5	5	5	6	6
72.5°	4	4	4	4	4	4	4	4	4	4	4
75°	3	3	3	3	3	3	3	3	3	4	4
77.5°	2	2	2	3	3	3	3	3	3	3	3
80°	2	2	2	2	2	2	2	2	2	2	2
82.5°	1	1	1	1	1	1	1	1	1	1	1
85°	1	0	0	1	0	1	1	1	1	1	1
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	994	994	994	994
2.5°	1009	1010	1012	1011
5°	975	980	985	986
7.5°	915	918	920	921
10°	858	859	860	860
12.5°	821	821	822	822
15°	805	805	805	805
17.5°	809	808	808	808
20°	844	843	843	842
22.5°	934	934	933	932
25°	1057	1059	1058	1058
27.5°	1189	1192	1195	1195
30°	1324	1330	1335	1334
32.5°	1401	1407	1409	1409
35°	1375	1380	1382	1382
37.5°	1249	1253	1255	1256
40°	1065	1067	1069	1070
42.5°	880	882	883	883
45°	696	698	699	699
47.5°	504	506	506	505
50°	329	330	331	330
52.5°	204	204	204	205
55°	125	124	124	124
57.5°	70	70	70	70
60°	33	33	33	33
62.5°	13	13	13	13
65°	9	9	9	9
67.5°	7	7	7	7
70°	6	6	6	6
72.5°	4	4	4	4
75°	4	4	4	4
77.5°	3	3	3	3
80°	2	2	2	2
82.5°	1	1	1	1
85°	1	1	1	1
87.5°	0	0	0	1
90°	0	0	0	0

(END OF REPORT)