

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: P21906

Luminaire Tested: **PD8V142E-80VWWC\_32TTT**

Issue Date: 03/03/2020



**Test Information**

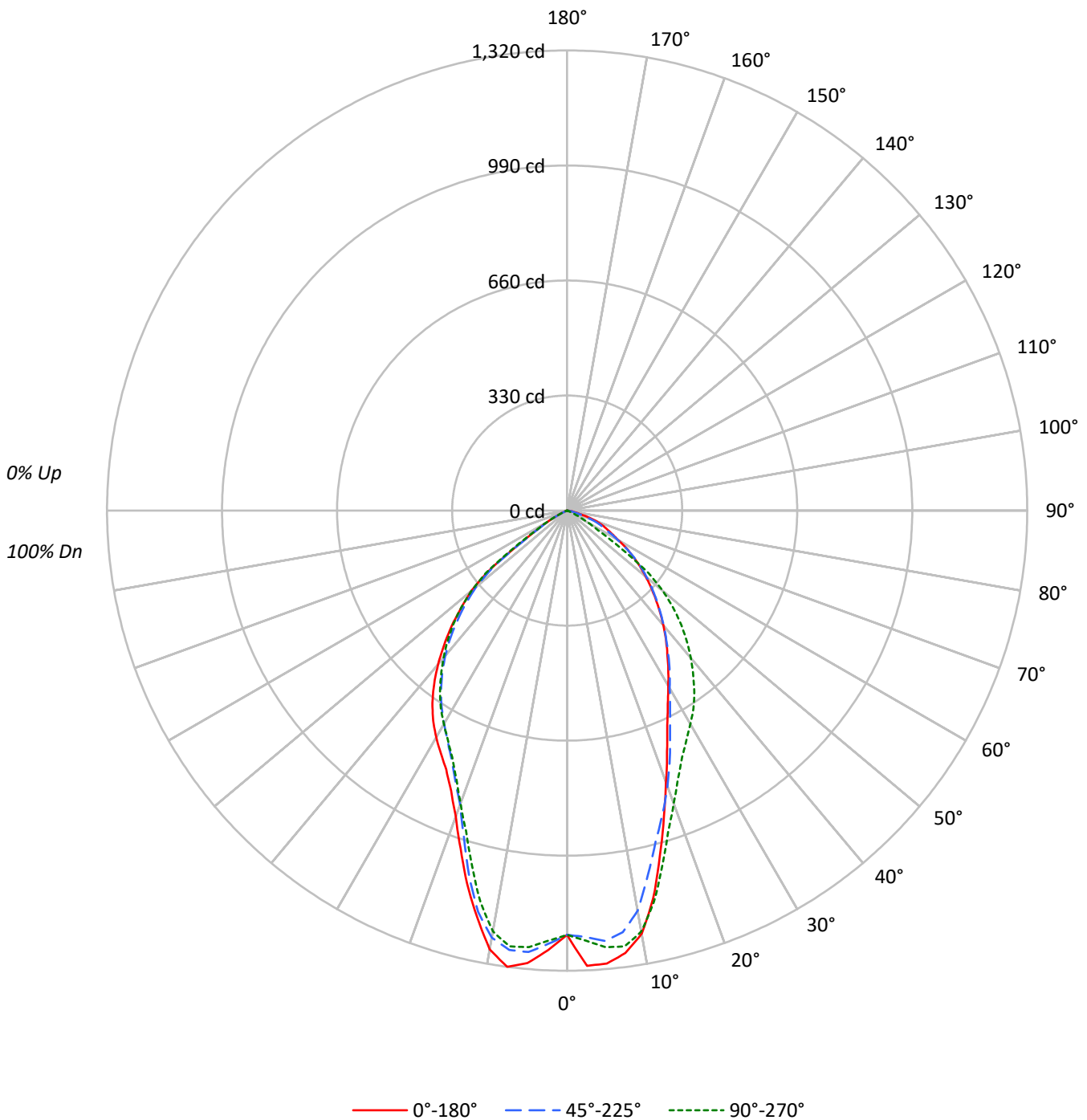
Test Method: LM-79-08  
Report Number: P21906  
Test Lab: INNOVATION CENTER P2  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PD8V142E-80VWWC\_32TTT  
Description: HALO 8-INCH RECESSED CFL OPEN DOWNLIGHT FIXTURE IN "a"  
POSITION, VERTICAL LAMP. SPECULAR CLEAR REFLECTOR.  
Light Source: (1) 32W CFL TTT  
CF32DT/E/IN/827  
Ballast/Driver: (1) SYLVANIA ELECTRONIC BALLAST  
QTP2x26CF/UNV DM

**Summary**

Lumens per Lamp: 2400 (1 lamp)  
Luminaire Lumens: 1704.8 lumens  
Efficiency: 71.0%  
Efficacy: 53.1 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 0.89 / 1.01  
Luminous Opening: Vertical Cylinder (Dia: 0.7' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 32.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 0.2678  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: 13 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	0
RCR																				
0	85	85	85	85	83	83	83	83	79	79	79		76	76	76		72	72	72	71
1	79	77	75	73	78	75	74	72	73	71	69		70	69	67		67	66	65	64
2	74	70	66	63	72	69	65	62	66	63	61		64	62	60		62	60	58	57
3	69	63	59	55	68	62	58	55	60	57	54		58	56	53		57	54	52	51
4	64	58	53	49	63	57	52	49	55	51	48		54	50	47		52	49	47	45
5	60	53	47	44	59	52	47	43	51	46	43		49	46	43		48	45	42	41
6	56	48	43	39	55	48	43	39	47	42	39		45	42	39		44	41	38	37
7	53	45	39	36	52	44	39	35	43	39	35		42	38	35		41	38	35	34
8	49	41	36	32	48	41	36	32	40	35	32		39	35	32		38	35	32	31
9	47	38	33	30	46	38	33	30	37	33	30		36	32	29		36	32	29	28
10	44	36	31	28	43	35	31	27	35	30	27		34	30	27		34	30	27	26

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

	0°	90°	180°
0°	34242	34242	34242
5°	36252	34945	36224
10°	34102	33936	35375
15°	28522	29271	30771
20°	23277	25102	26197
25°	19427	22317	23461
30°	17048	20781	22074
35°	15259	19371	20529
40°	13665	17583	18348
45°	12081	15547	15749
50°	10571	12836	12872
55°	9028	7160	6421
60°	7184	2951	2822
65°	6030	670	622
70°	4877	219	274
75°	2328	129	194
80°	1354	80	80
85°	628	0	0



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	118.7	7.0	4.9	0°	1217	1217	1217	1217	1217	
10°-20°	291.4	17.1	12.1	5°	1304	1239	1257	1271	1303	122
20°-30°	350.9	20.6	14.6	15°	1027	982	1054	1085	1108	286
30°-40°	368.6	21.6	15.4	25°	679	698	780	785	820	316
40°-50°	322.6	18.9	13.4	35°	501	506	636	631	674	314
50°-60°	180.0	10.6	7.5	45°	359	362	462	445	468	277
60°-70°	55.3	3.2	2.3	55°	232	234	184	157	165	207
70°-80°	15.3	0.9	0.6	65°	126	116	14	11	13	125
80°-90°	2.0	0.1	0.1	75°	36	27	2	3	3	47
90°-100°	0.0	0.0	0.0	85°	6	3	0	0	0	7
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°	761.0	44.6	31.7							
0°-40°	1129.5	66.3	47.1							
0°-60°	1632.1	95.7	68.0							
0°-90°	1704.8	100.0	71.0							
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°	1704.8	100.0	71.0							



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217
2.5°	1307	1212	1214	1219	1221	1221	1218	1222	1222	1224	1228
5°	1304	1215	1217	1225	1229	1231	1230	1236	1236	1239	1242
7.5°	1280	1201	1207	1217	1222	1221	1217	1220	1219	1220	1223
10°	1232	1153	1148	1155	1156	1150	1145	1152	1158	1165	1173
12.5°	1140	1069	1060	1055	1053	1048	1041	1049	1058	1070	1084
15°	1027	963	959	961	957	951	946	953	964	982	1003
17.5°	922	863	860	868	870	868	868	877	891	911	935
20°	829	777	773	783	788	791	796	807	820	841	866
22.5°	748	703	699	708	713	719	726	739	750	769	795
25°	679	635	631	639	644	650	656	667	679	698	726
27.5°	625	582	576	584	589	594	597	605	618	639	666
30°	580	540	532	540	544	547	548	554	568	588	613
32.5°	540	502	496	503	506	508	508	515	528	547	567
35°	501	466	461	468	471	472	472	479	490	506	523
37.5°	465	433	427	435	438	439	439	445	453	467	482
40°	429	400	395	403	406	407	407	412	419	431	444
42.5°	393	366	362	370	374	376	376	380	385	395	407
45°	359	335	332	340	345	348	347	349	353	362	373
47.5°	326	305	304	311	317	319	318	320	323	330	340
50°	294	276	275	282	287	289	290	291	294	298	307
52.5°	263	246	246	252	257	260	260	262	264	267	273
55°	232	218	218	223	227	230	230	231	232	234	235
57.5°	203	189	189	195	197	199	199	200	200	200	198
60°	168	158	158	162	165	167	167	167	167	166	164
62.5°	145	134	134	138	139	140	140	139	139	137	134
65°	126	117	117	120	120	121	120	119	118	116	113
67.5°	108	100	99	102	101	101	100	99	98	96	93
70°	89	82	82	82	81	80	78	76	74	73	70
72.5°	64	59	58	57	55	53	51	50	48	47	46
75°	36	33	33	32	31	31	30	29	28	27	26
77.5°	25	22	22	22	21	21	20	20	19	18	17
80°	17	15	15	15	14	14	13	13	13	12	11
82.5°	11	10	10	9	9	8	8	7	7	6	6
85°	6	5	5	5	4	4	4	3	3	3	2
87.5°	2	2	2	1	1	1	1	1	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°	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217
2.5°	1225	1227	1230	1231	1233	1233	1232	1235	1244	1249	1253
5°	1239	1240	1241	1241	1245	1247	1251	1257	1269	1277	1279
7.5°	1222	1224	1224	1223	1232	1239	1249	1261	1276	1283	1285
10°	1174	1179	1184	1186	1202	1213	1219	1226	1239	1250	1253
12.5°	1093	1104	1115	1124	1142	1152	1152	1150	1157	1169	1177
15°	1017	1031	1047	1053	1060	1060	1056	1054	1059	1072	1084
17.5°	953	970	986	985	985	980	974	964	969	976	987
20°	887	906	923	919	918	913	903	894	891	896	908
22.5°	818	842	861	854	855	852	842	831	831	840	853
25°	751	777	797	791	795	796	789	780	784	792	805
27.5°	691	718	742	737	744	750	744	741	744	753	766
30°	637	665	692	691	700	707	707	707	711	722	732
32.5°	590	618	645	646	658	670	673	674	680	692	697
35°	545	574	599	600	616	627	633	636	646	654	657
37.5°	503	530	553	553	570	586	591	594	605	612	614
40°	461	487	507	506	523	541	548	552	561	566	567
42.5°	421	445	462	460	477	495	503	508	514	518	517
45°	384	405	418	416	429	449	457	462	466	467	465
47.5°	349	367	376	373	385	400	408	412	414	413	410
50°	314	328	328	325	334	347	354	357	359	357	354
52.5°	277	287	286	279	282	291	295	294	292	285	281
55°	229	223	209	188	183	186	187	184	182	175	171
57.5°	185	167	141	111	101	104	106	105	105	104	100
60°	150	133	105	78	67	69	70	69	69	67	66
62.5°	121	104	78	53	41	41	41	40	39	39	37
65°	99	80	55	30	18	16	15	14	14	13	12
67.5°	81	63	41	19	8	7	6	6	6	5	5
70°	62	47	31	14	7	5	5	4	4	4	4
72.5°	40	31	20	9	5	4	3	3	3	3	3
75°	22	17	11	6	4	3	3	2	2	2	2
77.5°	15	11	7	4	3	2	2	2	2	2	2
80°	9	7	5	3	2	2	1	1	1	1	1
82.5°	5	3	2	1	1	1	1	1	0	0	0
85°	2	1	1	1	1	0	0	0	0	0	0
87.5°	1	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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217	1217
2.5°	1253	1249	1246	1244	1246	1244	1243	1240	1243	1247	1252
5°	1280	1277	1275	1273	1275	1271	1268	1265	1268	1273	1281
7.5°	1282	1276	1276	1275	1277	1271	1268	1267	1274	1282	1291
10°	1248	1241	1237	1239	1246	1244	1242	1238	1242	1252	1264
12.5°	1177	1171	1165	1166	1176	1179	1180	1173	1169	1177	1195
15°	1087	1085	1078	1074	1082	1085	1090	1083	1080	1090	1109
17.5°	988	987	980	976	983	984	993	988	984	996	1016
20°	909	907	900	894	898	897	905	900	895	907	929
22.5°	851	852	847	841	841	838	846	840	835	845	867
25°	801	805	805	796	791	785	796	792	788	797	817
27.5°	760	765	769	759	749	743	755	753	752	760	776
30°	723	729	736	726	713	706	717	717	720	727	737
32.5°	687	692	700	691	676	670	681	682	687	693	699
35°	646	650	658	651	637	631	640	643	648	653	658
37.5°	602	604	612	605	594	589	598	600	604	610	614
40°	556	557	563	557	546	544	553	554	556	561	566
42.5°	506	505	512	506	495	496	505	506	507	511	516
45°	452	451	457	453	442	445	455	456	456	460	464
47.5°	399	398	403	400	391	393	403	404	405	407	410
50°	345	343	347	345	339	341	348	350	351	353	355
52.5°	275	272	272	271	268	269	272	273	275	276	278
55°	166	162	162	160	158	157	158	159	159	160	160
57.5°	97	96	96	96	95	96	97	97	98	99	98
60°	64	63	62	62	62	63	63	64	65	65	65
62.5°	35	34	34	34	34	34	35	35	36	37	38
65°	12	12	11	11	11	11	11	11	12	12	13
67.5°	5	5	5	5	5	6	6	6	6	6	6
70°	4	4	4	4	4	4	4	4	4	5	5
72.5°	3	3	3	3	3	3	3	3	3	4	4
75°	2	2	2	2	2	3	3	3	3	3	3
77.5°	2	2	2	2	2	2	2	3	2	3	3
80°	1	1	1	1	1	1	1	2	1	1	2
82.5°	0	0	0	0	0	0	0	1	1	0	1
85°	0	0	0	0	0	0	0	0	0	0	0
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°	1217	1217	1217	1217
2.5°	1258	1264	1263	1262
5°	1290	1300	1303	1303
7.5°	1301	1314	1319	1320
10°	1271	1282	1281	1278
12.5°	1206	1213	1205	1194
15°	1112	1125	1114	1108
17.5°	1024	1033	1029	1017
20°	936	945	943	933
22.5°	870	878	879	870
25°	817	824	828	820
27.5°	773	779	787	785
30°	733	737	750	751
32.5°	693	697	711	715
35°	651	653	669	674
37.5°	610	609	624	627
40°	563	561	570	576
42.5°	514	510	520	522
45°	461	460	466	468
47.5°	411	408	412	412
50°	357	355	357	358
52.5°	282	281	284	284
55°	164	163	165	165
57.5°	99	98	99	99
60°	66	65	66	66
62.5°	38	38	38	38
65°	13	14	14	13
67.5°	7	7	7	6
70°	5	5	5	5
72.5°	4	4	4	4
75°	3	3	3	3
77.5°	3	3	3	3
80°	2	2	2	1
82.5°	1	1	1	0
85°	1	1	1	0
87.5°	0	0	0	0
90°	0	0	0	0

(END OF REPORT)