

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: P21907

Luminaire Tested: **PD8V142E-80VWWC_42TTT**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: P21907
Test Lab: INNOVATION CENTER P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PD8V142E-80VWWC_42TTT
Description: HALO 8-INCH RECESSED CFL OPEN DOWNLIGHT FIXTURE IN "B"
POSITION, VERTICAL LAMP. SPECULAR CLEAR REFLECTOR.
Light Source: (1) 42W CFL TTT
CF42DT/E/IN/827/ECO
Ballast/Driver: (1) SYLVANIA ELECTRONIC BALLAST
QTP2x26CF/UNV DM

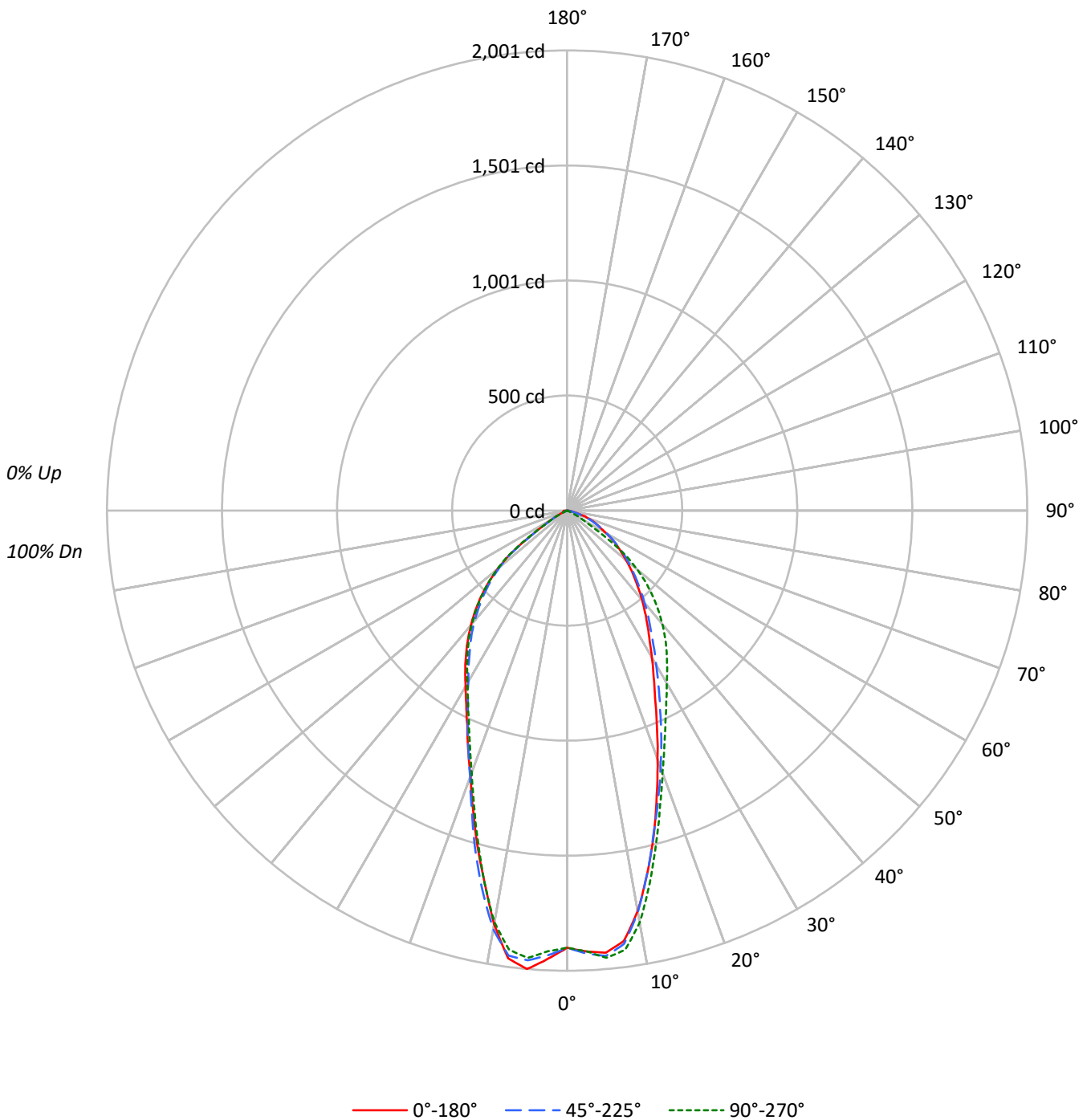
Summary

Lumens per Lamp: 3200 (1 lamp)
Luminaire Lumens: 2177.8 lumens
Efficiency: 68.1%
Efficacy: 49.7 lumens/watt
Spacing Criteria (0/90/45): 0.75 / 0.77 / 0.88
Luminous Opening: Vertical Cylinder (Dia: 0.7' x H: 0.1')
CIE Type: Direct

Input Watts (W): 43.8
Input Voltage (V): NR
Input Current (A_{in}): 0.3648
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 4 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										
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	50	30	10	0		
RCR																										
0	81	81	81	81	79	79	79	79	76	76	76	72	72	72	69	69	69	68								
1	76	74	72	70	75	72	71	69	70	68	67	67	66	65	65	64	63	62								
2	71	67	64	61	70	66	63	60	64	61	59	62	60	58	60	58	56	55								
3	67	61	57	54	65	60	56	53	58	55	52	57	54	52	55	53	51	50								
4	62	56	51	48	61	55	51	48	54	50	47	52	49	46	51	48	46	45								
5	58	51	47	43	57	51	46	43	49	45	42	48	45	42	47	44	42	40								
6	55	47	42	39	54	47	42	39	46	42	39	45	41	38	44	40	38	37								
7	51	44	39	36	50	43	39	35	42	38	35	42	38	35	41	37	35	34								
8	48	41	36	33	48	40	36	33	40	35	32	39	35	32	38	35	32	31								
9	46	38	33	30	45	38	33	30	37	33	30	36	33	30	36	32	30	29								
10	43	36	31	28	43	35	31	28	35	31	28	34	30	28	34	30	28	27								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	53488	53488	53488
5°	53655	54266	55629
10°	48939	50350	50572
15°	40463	41519	41880
20°	32262	34031	34480
25°	25893	28955	29413
30°	21663	25484	25954
35°	18518	22965	23361
40°	16118	20514	20705
45°	13966	17735	17836
50°	12009	14274	14238
55°	10274	8484	7822
60°	8296	3250	3464
65°	6843	814	1149
70°	5316	329	932
75°	2910	259	1035
80°	1593	239	1195
85°	837	105	1570



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	182.0	8.4	5.7	0°	1901	1901	1901	1901	1901	
10°-20°	417.1	19.2	13.0	5°	1930	1944	1952	1963	2001	179
20°-30°	461.6	21.2	14.4	15°	1457	1453	1495	1537	1508	404
30°-40°	443.3	20.4	13.9	25°	905	957	1012	1020	1028	421
40°-50°	372.3	17.1	11.6	35°	608	634	754	737	767	382
50°-60°	207.5	9.5	6.5	45°	415	427	527	508	530	321
60°-70°	66.4	3.1	2.1	55°	264	270	218	198	201	235
70°-80°	21.5	1.0	0.7	65°	143	138	17	17	24	142
80°-90°	6.0	0.3	0.2	75°	45	36	4	6	16	54
90°-100°	0.0	0.0	0.0	85°	8	7	1	4	15	10
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°	1060.7	48.7	33.1							
0°-40°	1504.1	69.1	47.0							
0°-60°	2083.9	95.7	65.1							
0°-90°	2177.8	100.0	68.1							
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°	2177.8	100.0	68.1							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901
2.5°	1919	1920	1923	1927	1929	1932	1933	1932	1930	1928	1925
5°	1930	1930	1934	1938	1944	1945	1947	1947	1946	1944	1941
7.5°	1888	1890	1896	1900	1899	1890	1890	1891	1895	1900	1905
10°	1768	1770	1774	1774	1764	1743	1739	1743	1755	1772	1791
12.5°	1613	1603	1594	1593	1586	1573	1560	1567	1582	1612	1632
15°	1457	1447	1427	1420	1422	1409	1403	1407	1421	1453	1474
17.5°	1296	1285	1268	1261	1264	1266	1263	1270	1285	1316	1334
20°	1149	1138	1123	1119	1125	1132	1135	1147	1161	1188	1204
22.5°	1021	1013	999	996	1005	1013	1018	1033	1046	1069	1090
25°	905	900	890	886	894	904	914	923	944	957	978
27.5°	814	808	799	795	803	811	818	826	851	860	879
30°	737	730	719	716	725	730	735	742	764	774	792
32.5°	667	662	652	648	658	661	665	675	691	700	714
35°	608	604	594	591	600	602	606	615	628	634	648
37.5°	556	553	543	541	552	552	555	562	572	579	591
40°	506	504	495	494	501	503	505	513	519	523	535
42.5°	459	457	449	449	458	457	461	465	470	472	483
45°	415	413	406	407	415	417	420	419	425	427	436
47.5°	374	372	366	369	379	378	381	382	384	385	394
50°	334	332	328	331	340	340	343	344	346	346	353
52.5°	297	296	292	295	303	305	307	307	309	309	313
55°	264	263	260	262	268	269	271	271	272	270	270
57.5°	230	228	226	228	234	235	236	235	236	235	229
60°	194	193	192	193	199	200	200	199	199	195	191
62.5°	165	164	162	163	167	167	167	166	165	163	159
65°	143	143	141	142	145	144	143	142	140	138	132
67.5°	121	121	119	119	121	120	119	117	115	113	108
70°	97	97	95	95	96	95	93	91	89	87	83
72.5°	73	74	71	71	70	67	65	64	62	60	56
75°	45	46	44	45	43	41	40	39	37	36	33
77.5°	28	29	29	28	27	26	26	26	25	24	22
80°	20	21	21	21	20	19	19	18	18	17	15
82.5°	14	14	15	14	13	12	13	12	12	11	10
85°	8	9	10	9	8	7	8	8	7	7	6
87.5°	5	6	7	6	4	4	6	5	5	5	4
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°	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901
2.5°	1920	1917	1914	1912	1913	1914	1916	1918	1919	1922	1925
5°	1939	1937	1933	1931	1934	1942	1948	1952	1953	1952	1956
7.5°	1910	1913	1915	1914	1918	1925	1925	1927	1929	1931	1931
10°	1812	1819	1823	1829	1838	1838	1827	1819	1821	1828	1831
12.5°	1663	1676	1678	1687	1696	1691	1671	1659	1664	1681	1693
15°	1505	1518	1521	1525	1530	1526	1506	1495	1504	1529	1542
17.5°	1363	1381	1383	1378	1378	1375	1356	1345	1355	1380	1389
20°	1235	1256	1257	1247	1245	1244	1225	1212	1221	1244	1252
22.5°	1117	1140	1142	1129	1126	1131	1115	1104	1114	1136	1142
25°	1006	1031	1035	1021	1020	1029	1020	1012	1021	1044	1046
27.5°	906	934	942	928	926	938	935	933	945	966	962
30°	818	846	860	847	846	861	862	867	883	898	888
32.5°	739	767	784	772	772	790	797	809	827	834	821
35°	673	699	717	706	707	729	741	754	769	773	758
37.5°	614	638	654	646	648	671	686	701	711	714	699
40°	558	579	594	587	589	615	631	644	651	652	639
42.5°	505	524	537	530	533	560	577	587	591	591	578
45°	457	473	481	475	478	506	521	527	530	530	517
47.5°	412	423	424	417	422	446	460	465	465	464	453
50°	368	373	366	357	361	382	393	397	397	395	388
52.5°	322	323	312	299	300	317	323	323	321	318	313
55°	269	259	239	216	211	220	221	218	214	210	203
57.5°	216	195	158	124	112	117	118	117	116	115	112
60°	176	152	117	84	73	76	76	76	75	74	73
62.5°	142	119	85	55	44	44	44	44	43	43	44
65°	114	92	60	31	20	18	17	17	16	16	17
67.5°	91	71	45	20	10	9	8	8	7	7	7
70°	70	53	34	15	8	7	6	6	6	6	6
72.5°	48	36	23	11	7	6	5	5	4	4	4
75°	28	21	14	8	5	4	4	4	4	4	3
77.5°	19	14	10	6	4	4	3	3	3	3	3
80°	13	10	7	5	4	3	3	3	2	2	2
82.5°	8	6	5	3	3	2	2	2	2	1	1
85°	5	4	3	3	2	2	2	1	1	1	1
87.5°	4	3	3	2	2	2	1	1	1	1	1
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°	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901
2.5°	1929	1934	1936	1937	1937	1936	1935	1935	1937	1939	1943
5°	1963	1968	1972	1972	1969	1963	1959	1959	1962	1966	1976
7.5°	1934	1935	1932	1940	1950	1952	1949	1943	1938	1946	1955
10°	1830	1823	1819	1820	1840	1849	1853	1839	1832	1843	1843
12.5°	1690	1670	1663	1668	1689	1697	1704	1696	1686	1691	1688
15°	1539	1519	1506	1508	1528	1537	1545	1540	1535	1542	1536
17.5°	1386	1364	1349	1356	1368	1377	1390	1389	1384	1392	1388
20°	1249	1229	1214	1215	1230	1233	1247	1249	1244	1255	1250
22.5°	1142	1127	1113	1118	1124	1122	1135	1139	1137	1147	1140
25°	1049	1039	1025	1028	1027	1020	1033	1042	1044	1051	1039
27.5°	967	962	950	950	947	934	948	958	965	968	954
30°	893	894	885	882	871	860	874	887	894	895	881
32.5°	826	831	825	819	805	797	809	823	828	829	816
35°	764	769	766	760	749	737	753	763	767	767	757
37.5°	705	709	710	703	692	683	696	704	708	707	698
40°	643	647	645	643	631	625	637	643	646	644	637
42.5°	582	585	587	585	579	566	576	581	584	582	577
45°	520	523	522	524	517	508	513	519	521	521	517
47.5°	455	457	461	460	457	447	454	455	456	456	453
50°	388	389	394	393	390	384	388	388	389	388	386
52.5°	310	310	315	314	313	310	312	308	308	306	305
55°	199	198	203	202	201	198	200	195	194	193	192
57.5°	110	110	112	112	112	111	113	113	111	112	116
60°	72	72	74	73	73	73	74	76	76	78	78
62.5°	42	43	43	43	42	42	43	46	44	49	49
65°	15	16	16	16	16	17	18	19	18	22	24
67.5°	7	7	7	7	8	9	11	10	11	15	16
70°	5	5	6	6	7	8	9	8	11	12	15
72.5°	4	4	4	5	5	7	8	7	11	9	14
75°	3	4	4	4	5	6	8	8	9	9	14
77.5°	3	3	3	4	4	6	8	9	8	9	14
80°	2	2	2	3	3	5	7	9	7	9	10
82.5°	1	1	1	2	2	4	6	8	6	10	7
85°	1	1	1	1	2	4	6	8	6	10	6
87.5°	1	1	1	1	2	4	6	8	9	8	7
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1901	1901	1901	1901
2.5°	1947	1950	1952	1952
5°	1987	1995	2000	2001
7.5°	1962	1964	1963	1964
10°	1841	1833	1828	1827
12.5°	1682	1670	1660	1657
15°	1529	1519	1510	1508
17.5°	1382	1373	1363	1361
20°	1246	1240	1231	1228
22.5°	1135	1134	1126	1124
25°	1035	1039	1032	1028
27.5°	949	958	953	950
30°	875	887	886	883
32.5°	810	824	826	825
35°	750	764	768	767
37.5°	693	706	711	710
40°	633	647	652	650
42.5°	574	589	593	592
45°	515	527	531	530
47.5°	453	460	464	464
50°	387	392	395	396
52.5°	305	310	313	314
55°	193	197	199	201
57.5°	115	118	116	119
60°	78	80	77	81
62.5°	49	49	46	49
65°	24	24	20	24
67.5°	17	17	13	18
70°	16	16	12	17
72.5°	15	16	10	16
75°	15	16	10	16
77.5°	15	16	10	16
80°	14	15	9	15
82.5°	13	14	8	14
85°	13	14	8	15
87.5°	13	14	8	15
90°	0	0	0	0

(END OF REPORT)