

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: P31212

Luminaire Tested: **PD8H242E-82HC\_42TTT**

Issue Date: 03/03/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P31212  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PD8H242E-82HC\_42TTT  
Description: HALO 8-INCH APERTURE OPEN DOWNLIGHT, HORIZONTAL LAMP.  
SPECULAR CLEAR TRIM.  
Light Source: (2) GE GX24Q-4 FOUR PIN BIAx HEX CFL LAMP  
F42TBX/840/A/4P 42 WATTS  
Ballast/Driver: (1) ADVANCE ELECTRONIC BALLAST  
ICF-2S42-90C-M2-LD

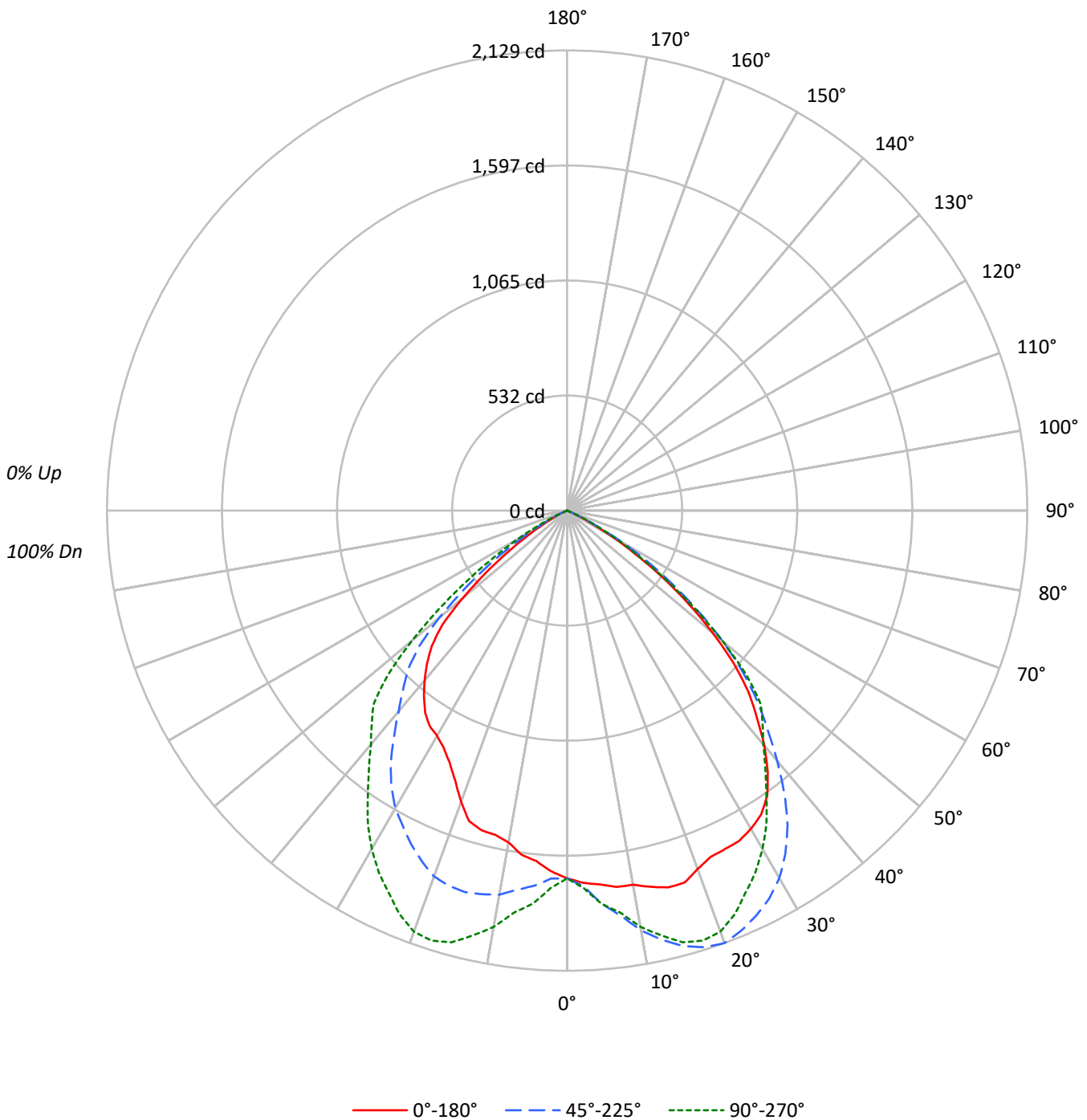
**Summary**

Lumens per Lamp: 3200 (2 lamps)  
Luminaire Lumens: 3929.3 lumens  
Efficiency: 61.4%  
Efficacy: 42.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.43 / 1.39  
Luminous Opening: Vertical Cylinder (Dia: 0.7' x H: 0.1')  
CIE Type: Direct

Input Watts (W): 92.8  
Input Voltage (V): 120.03  
Input Current (A<sub>in</sub>): 0.7743  
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	73	73	73	73	71	71	71	71	68	68	68		65	65	65		63	63	63	61
1	69	67	65	63	67	65	64	62	63	61	60		60	59	58		58	57	57	55
2	64	60	57	54	63	59	56	54	57	55	53		55	53	51		53	52	50	49
3	59	54	50	47	58	53	50	47	52	49	46		50	48	45		49	47	45	44
4	55	49	45	42	54	48	44	41	47	44	41		46	43	40		44	42	40	39
5	51	45	40	37	50	44	40	36	43	39	36		42	38	36		41	38	35	34
6	48	41	36	33	47	40	36	33	39	35	32		38	35	32		37	34	32	31
7	45	37	33	29	44	37	32	29	36	32	29		35	31	29		34	31	29	28
8	42	34	30	26	41	34	29	26	33	29	26		32	29	26		32	28	26	25
9	39	32	27	24	38	31	27	24	31	27	24		30	26	24		29	26	24	23
10	37	29	25	22	36	29	25	22	28	24	22		28	24	22		27	24	22	21

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

	0°	90°	180°
0°	47860	47860	47860
5°	48262	50764	45259
10°	48662	54143	43154
15°	50128	57432	42518
20°	49558	58206	40264
25°	49441	55849	36794
30°	49969	53114	35360
35°	49128	48946	34844
40°	45200	44977	32682
45°	39911	42637	29782
50°	31569	33726	22688
55°	20898	21832	13115
60°	10049	11203	5431
65°	2106	2871	1818
70°	219	274	274
75°	129	129	129
80°	0	80	80
85°	0	0	0



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	171.1	4.4	2.7	0°	1701	1701	1701	1701	1701	
10°-20°	540.5	13.8	8.4	5°	1736	1825	1826	1742	1628	167
20°-30°	840.2	21.4	13.1	15°	1805	2086	2068	1827	1531	507
30°-40°	967.4	24.6	15.1	25°	1728	2068	1952	1705	1286	800
40°-50°	868.7	22.1	13.6	35°	1613	1778	1607	1423	1144	996
50°-60°	464.4	11.8	7.3	45°	1186	1242	1267	1041	885	900
60°-70°	74.6	1.9	1.2	55°	537	597	561	450	337	482
70°-80°	2.3	0.1	0.0	65°	44	57	60	45	38	72
80°-90°	0.1	0.0	0.0	75°	2	2	2	2	2	2
90°-100°	0.0	0.0	0.0	85°	0	0	0	0	0	0
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°	1551.8	39.5	24.2							
0°-40°	2519.2	64.1	39.4							
0°-60°	3852.3	98.0	60.2							
0°-90°	3929.3	100.0	61.4							
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°	3929.3	100.0	61.4							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1701	1701	1701	1701	1701	1701	1701	1701	1701
2.5°	1724	1725	1739	1749	1748	1735	1704	1679	1671
5°	1736	1774	1825	1841	1826	1799	1742	1677	1628
7.5°	1756	1813	1889	1902	1875	1837	1769	1671	1607
10°	1758	1858	1972	1983	1956	1891	1804	1670	1559
12.5°	1783	1910	2035	2053	2013	1927	1818	1671	1537
15°	1805	1957	2086	2114	2068	1958	1827	1675	1531
17.5°	1805	1980	2118	2142	2086	1956	1820	1663	1507
20°	1765	1975	2129	2146	2073	1936	1801	1629	1434
22.5°	1734	1956	2104	2113	2023	1891	1756	1570	1352
25°	1728	1944	2068	2053	1952	1833	1705	1515	1286
27.5°	1723	1929	2024	1994	1887	1774	1646	1473	1237
30°	1700	1900	1963	1914	1807	1706	1590	1427	1203
32.5°	1669	1837	1880	1823	1716	1618	1513	1367	1183
35°	1613	1738	1778	1711	1607	1522	1423	1293	1144
37.5°	1525	1618	1652	1590	1506	1426	1316	1206	1088
40°	1419	1483	1511	1476	1412	1335	1213	1117	1026
42.5°	1299	1349	1372	1374	1338	1254	1124	1030	959
45°	1186	1211	1242	1276	1267	1169	1041	945	885
47.5°	1044	1071	1099	1139	1125	1048	928	832	784
50°	878	897	936	963	938	877	773	675	631
52.5°	708	730	764	768	745	696	606	515	475
55°	537	571	597	592	561	530	450	369	337
57.5°	371	416	443	420	396	374	312	243	213
60°	235	273	293	272	262	245	190	144	127
62.5°	124	148	156	149	149	145	104	76	75
65°	44	54	57	59	60	61	45	31	38
67.5°	7	7	8	9	10	9	9	9	9
70°	4	4	5	5	5	5	5	5	5
72.5°	3	3	3	3	4	3	3	3	3
75°	2	2	2	2	2	2	2	2	2
77.5°	1	1	1	1	1	1	1	1	1
80°	0	0	0	1	1	1	1	1	1
82.5°	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)