

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: P210256

Luminaire Tested: **PR840D010 - PR8M34WW - 4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P210256  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29052)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PR840D010 - PR8M34WW - 4000K  
Description: HALO 8" ROUND DOWNLIGHT, WALLWASH, MATTE WHITE FINISH  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3880.3 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 1.18 / 1.17  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

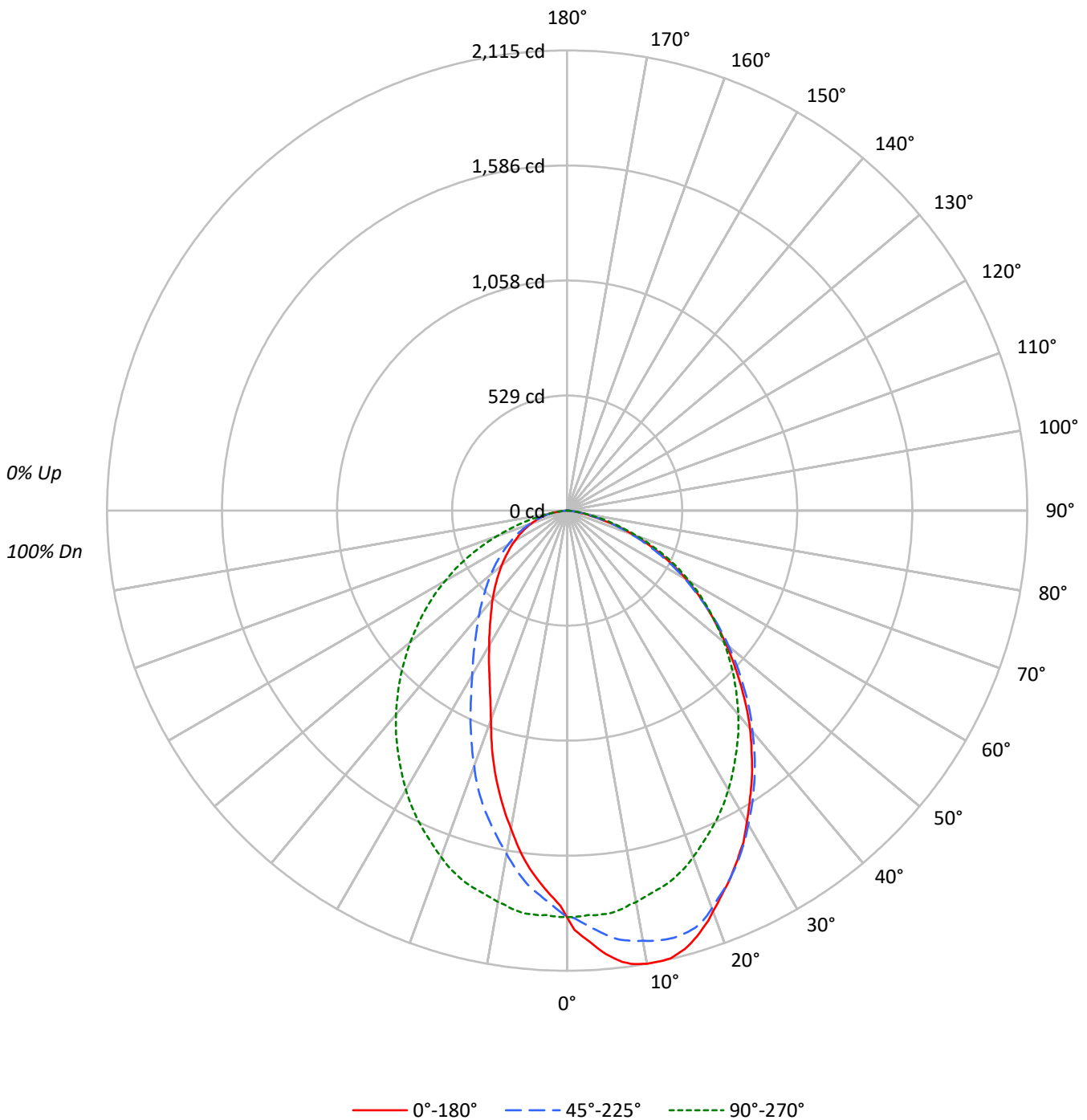
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66	64
4	86	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	38	33	32
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	31	29

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

	0°	90°	180°
0°	57627	57627	57627
5°	63320	57643	52232
10°	66222	57207	46498
15°	66638	56688	40461
20°	64318	55589	33642
25°	61744	54211	28737
30°	58829	52776	25541
35°	55796	51000	23106
40°	52624	49259	21455
45°	49100	47277	20012
50°	45670	45123	18868
55°	42396	42805	17827
60°	39082	40019	16991
65°	34658	36395	16497
70°	28950	30925	15850
75°	19921	24114	15393
80°	11809	15361	14508
85°	5732	6050	7748



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.9	4.5
10°-20°	483.9	12.5
20°-30°	667.6	17.2
30°-40°	728.2	18.8
40°-50°	683.8	17.6
50°-60°	559.1	14.4
60°-70°	379.0	9.8
70°-80°	174.0	4.5
80°-90°	28.7	0.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1327.4	34.2
0°-40°	2055.6	53.0
0°-60°	3298.5	85.0
0°-90°	3880.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3880.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1869	1869	1869	1869	1869	
5°	2046	1953	1862	1752	1687	198
15°	2087	2020	1776	1440	1267	584
25°	1815	1819	1593	1051	845	835
35°	1482	1501	1355	737	614	925
45°	1126	1149	1084	537	459	870
55°	789	791	796	383	332	706
65°	475	460	499	249	226	471
75°	167	176	202	131	129	189
85°	16	15	17	22	22	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1868.8	1868.8	1868.8	1868.8	1868.8	1868.8	1868.8	1868.8	1868.8
1°	1927.7	1893.5	1873.6	1890.7	1867.9	1846.0	1844.1	1835.6	1816.6
2°	1956.2	1920.1	1893.5	1900.2	1866.0	1831.8	1819.4	1799.5	1783.3
3°	1983.8	1946.7	1913.5	1909.7	1861.2	1816.6	1795.7	1769.1	1752.9
4°	2017.1	1974.3	1933.4	1921.1	1865.0	1805.2	1773.8	1738.7	1719.7
5°	2045.6	2002.8	1953.4	1929.6	1862.2	1792.8	1752.0	1708.3	1687.4
6°	2069.3	2023.7	1972.4	1940.1	1862.2	1777.6	1729.2	1676.0	1653.2
7°	2090.2	2042.7	1986.7	1946.7	1854.6	1760.5	1700.7	1642.7	1615.2
8°	2103.5	2057.0	1995.2	1948.6	1847.0	1740.6	1670.3	1604.7	1574.3
9°	2110.2	2067.4	2003.8	1946.7	1834.6	1718.7	1636.1	1563.9	1529.7
10°	2114.9	2074.1	2007.6	1945.8	1827.0	1696.9	1603.8	1522.1	1485.0
11°	2114.9	2075.0	2015.2	1943.9	1815.6	1674.1	1570.5	1480.3	1443.2
12°	2114.9	2074.1	2019.9	1943.9	1805.2	1653.2	1538.2	1439.4	1400.4
13°	2112.1	2075.0	2022.8	1945.8	1794.7	1631.3	1505.0	1397.6	1356.7
14°	2099.7	2073.1	2023.7	1943.9	1786.2	1614.2	1472.6	1356.7	1312.1
15°	2087.4	2061.7	2019.9	1942.0	1775.7	1591.4	1440.3	1314.0	1267.4
16°	2067.4	2045.6	2014.2	1937.2	1763.4	1568.6	1406.1	1271.2	1219.9
17°	2044.6	2024.7	2006.6	1928.7	1747.2	1542.0	1370.0	1226.6	1172.4
18°	2018.0	2003.8	1992.4	1917.3	1732.0	1513.5	1332.0	1180.0	1123.0
19°	1993.3	1978.1	1970.5	1906.8	1714.9	1486.0	1293.1	1133.5	1072.7
20°	1960.0	1948.6	1945.8	1891.6	1694.0	1453.6	1248.4	1085.0	1025.2
21°	1931.5	1923.9	1919.2	1875.5	1675.0	1426.1	1209.5	1036.6	981.4
22°	1902.1	1895.4	1895.4	1862.2	1654.1	1396.6	1168.6	993.8	941.5
23°	1874.5	1866.0	1872.6	1843.2	1634.2	1369.1	1129.7	952.9	907.3
24°	1847.0	1841.3	1846.0	1827.0	1614.2	1340.6	1090.7	918.7	874.1
25°	1814.7	1809.9	1819.4	1807.1	1593.3	1310.2	1050.8	886.4	844.6
26°	1786.2	1780.5	1791.9	1790.0	1574.3	1278.8	1011.9	855.1	817.1
27°	1753.9	1750.1	1761.5	1766.2	1551.5	1251.3	973.8	826.6	791.4
28°	1726.3	1720.6	1732.0	1743.4	1529.7	1219.0	937.7	799.0	765.8
29°	1688.3	1686.4	1698.8	1718.7	1505.9	1190.5	904.5	773.4	740.1
30°	1652.2	1654.1	1665.5	1694.0	1482.2	1160.1	873.1	748.7	717.3
32.5°	1564.8	1570.5	1584.8	1620.9	1419.4	1082.2	802.8	689.8	663.2
35°	1482.2	1481.2	1501.2	1541.1	1354.8	1005.2	737.3	637.5	613.8
37.5°	1392.8	1397.6	1415.6	1463.1	1292.1	930.1	681.2	591.0	571.0
40°	1307.3	1314.0	1326.3	1378.6	1223.7	850.3	630.9	548.2	533.0
42.5°	1218.0	1226.6	1239.9	1292.1	1153.4	777.2	583.4	510.2	495.0
45°	1125.9	1136.3	1148.7	1203.8	1084.1	705.9	536.8	475.0	458.9
47.5°	1038.5	1044.2	1059.4	1115.4	1011.9	646.1	496.9	438.9	425.6
50°	952.0	957.7	969.1	1026.1	940.6	588.1	457.9	405.7	393.3
52.5°	869.3	873.1	879.8	940.6	867.4	534.0	420.9	372.4	362.0
55°	788.6	790.5	791.4	852.2	796.2	481.7	382.9	341.1	331.6
57.5°	710.7	710.7	702.1	762.9	724.0	433.2	347.7	310.7	305.9
60°	633.7	633.7	623.3	676.5	648.9	386.7	313.5	282.2	275.5
62.5°	554.9	555.8	540.6	587.2	576.7	342.0	281.2	253.7	251.8
65°	475.0	476.0	459.8	500.7	498.8	298.3	248.9	227.1	226.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	398.1	397.1	381.9	416.1	421.8	258.4	217.6	200.5	200.5
70°	321.1	321.1	307.8	332.5	343.0	215.7	186.2	174.8	175.8
72.5°	250.8	249.9	241.3	256.5	267.9	175.8	158.7	151.1	152.0
75°	167.2	176.7	175.8	190.0	202.4	139.7	131.1	127.3	129.2
77.5°	107.4	113.1	119.7	132.1	138.7	105.5	102.6	102.6	104.5
80°	66.5	69.4	75.1	81.7	86.5	73.2	76.0	78.9	81.7
82.5°	38.0	38.0	39.9	43.7	50.4	44.7	48.5	52.3	52.3
85°	16.2	16.2	15.2	15.2	17.1	19.0	21.9	22.8	21.9
87.5°	3.8	3.8	2.9	1.9	2.9	3.8	4.8	4.8	4.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)