

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P580628

Luminaire Tested: **HC440D010-HM43040927-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580628
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC440D010-HM43040927-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3347.9 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

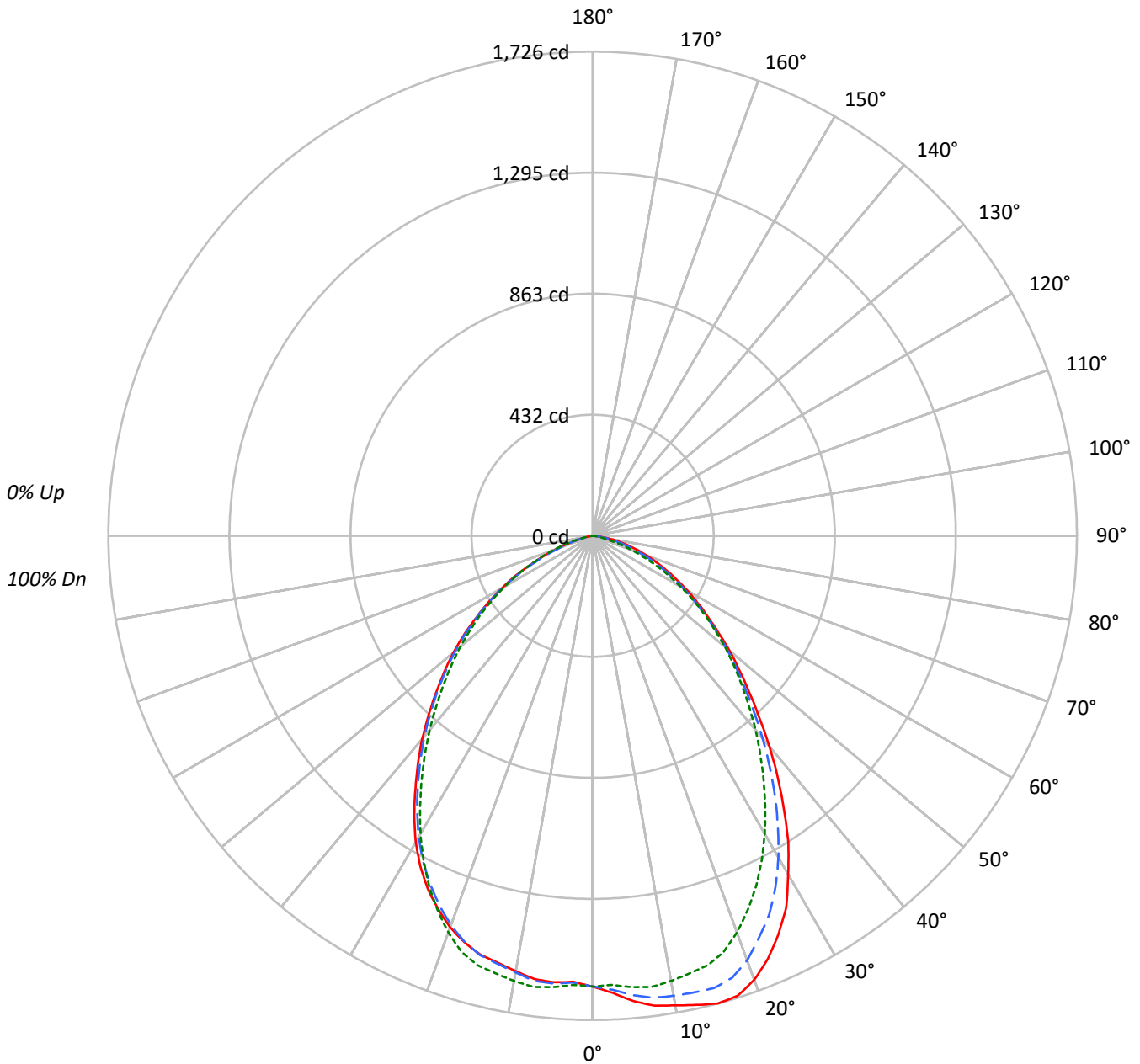
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88				
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76				76				
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46				46				
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41				41				
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	198167	198167	198167
5°	206180	199989	197847
10°	212910	201763	197417
15°	220405	202387	197381
20°	221150	197483	194924
25°	213332	187623	189107
30°	198529	174701	179644
35°	178825	159868	165740
40°	157667	145430	152064
45°	137858	131037	137474
50°	122082	117898	124135
55°	107373	104126	108319
60°	95889	88908	91596
65°	84289	72236	70951
70°	73606	53230	48542
75°	61049	32073	25878
80°	46242	12360	7742
85°	21512	2972	2972



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	4.6
10°-20°	452.2	13.5
20°-30°	654.9	19.6
30°-40°	690.9	20.6
40°-50°	598.0	17.9
50°-60°	443.0	13.2
60°-70°	255.3	7.6
70°-80°	89.2	2.7
80°-90°	9.4	0.3
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°	1262.1	37.7
0°-40°	1953.0	58.3
0°-60°	2994.0	89.4
0°-90°	3347.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3347.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1607	1607	1607	1607	1607	
5°	1665	1644	1615	1602	1598	160
15°	1726	1670	1585	1548	1546	485
25°	1568	1489	1379	1370	1390	717
35°	1188	1133	1062	1086	1101	742
45°	790	769	751	779	788	613
55°	499	488	484	502	504	450
65°	289	271	248	234	243	288
75°	128	108	67	54	54	138
85°	15	9	2	2	2	24
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°	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6	1606.6
2.5°	1630.5	1626.1	1619.6	1610.9	1602.2	1595.7	1593.5	1591.4	1591.4
5°	1665.2	1656.5	1643.5	1626.1	1615.2	1608.7	1602.2	1597.9	1597.9
7.5°	1689.1	1680.4	1660.9	1637.0	1621.8	1608.7	1600.1	1593.5	1593.5
10°	1699.9	1689.1	1665.2	1634.8	1610.9	1593.5	1580.5	1576.2	1576.2
12.5°	1713.0	1699.9	1667.4	1628.3	1597.9	1576.2	1563.1	1558.9	1558.9
15°	1726.0	1710.8	1669.5	1624.0	1584.9	1558.9	1548.0	1545.7	1545.7
17.5°	1719.5	1699.9	1652.1	1597.9	1554.5	1528.4	1517.6	1517.6	1519.7
20°	1684.8	1665.2	1610.9	1550.1	1504.5	1485.0	1476.4	1480.6	1485.0
22.5°	1632.6	1608.7	1550.1	1491.5	1443.7	1426.4	1426.4	1432.9	1439.4
25°	1567.5	1545.7	1489.4	1424.2	1378.6	1365.6	1370.0	1380.8	1389.5
27.5°	1493.7	1469.9	1411.2	1350.4	1304.8	1298.3	1309.1	1324.3	1328.7
30°	1393.9	1374.2	1324.3	1265.7	1226.6	1224.5	1239.7	1250.5	1261.3
32.5°	1298.3	1276.6	1228.8	1172.3	1144.1	1146.3	1163.7	1176.7	1183.2
35°	1187.6	1168.1	1133.3	1087.7	1061.7	1066.0	1085.6	1098.6	1100.7
37.5°	1083.3	1070.3	1035.6	1000.8	981.3	990.0	1007.3	1022.6	1022.6
40°	979.2	968.3	942.2	914.1	903.2	914.1	931.4	944.4	944.4
42.5°	879.3	872.8	851.1	831.6	825.1	840.2	855.4	866.2	864.1
45°	790.3	783.8	768.6	753.3	751.2	766.4	779.4	785.9	788.1
47.5°	709.9	705.6	692.6	681.7	681.7	696.9	707.8	714.3	716.4
50°	636.2	631.8	620.9	612.3	614.4	629.6	638.3	644.8	646.9
52.5°	562.3	560.2	551.4	540.5	547.2	557.9	568.8	573.2	575.3
55°	499.3	499.3	488.5	479.8	484.2	495.0	501.5	503.7	503.7
57.5°	442.9	440.8	427.7	419.0	421.2	432.0	436.4	438.5	438.5
60°	388.7	386.4	373.4	360.4	360.4	366.9	369.0	371.3	371.3
62.5°	336.5	334.4	319.1	308.3	303.9	301.8	301.8	306.1	314.8
65°	288.8	286.5	271.4	254.0	247.5	241.0	234.5	238.8	243.1
67.5°	245.3	241.0	225.8	210.6	195.4	184.5	173.6	180.1	188.9
70°	204.1	199.8	182.4	165.0	147.6	130.3	121.6	130.3	134.6
72.5°	165.0	160.6	143.3	125.9	104.3	86.9	84.6	86.9	89.0
75°	128.1	125.9	108.5	89.0	67.3	54.3	54.3	54.3	54.3
77.5°	95.5	91.1	73.8	56.5	39.1	30.4	28.2	28.2	28.2
80°	65.1	60.8	45.6	32.6	17.4	13.0	13.0	10.9	10.9
82.5°	36.9	34.8	23.9	13.0	6.5	4.4	4.4	4.4	4.4
85°	15.2	13.0	8.6	4.4	2.1	2.1	2.1	2.1	2.1
87.5°	2.1	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)