

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: P256296

Luminaire Tested: **HC4R20D010-HM412827-42RMDC**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P256296  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1805-779-41)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC4R20D010-HM412827-42RMDC  
Description: HALO COMMERCIAL 4" ROUND, RETROFIT FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1703.0 lumens  
Efficiency: N/A  
Efficacy: 85.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.03  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct

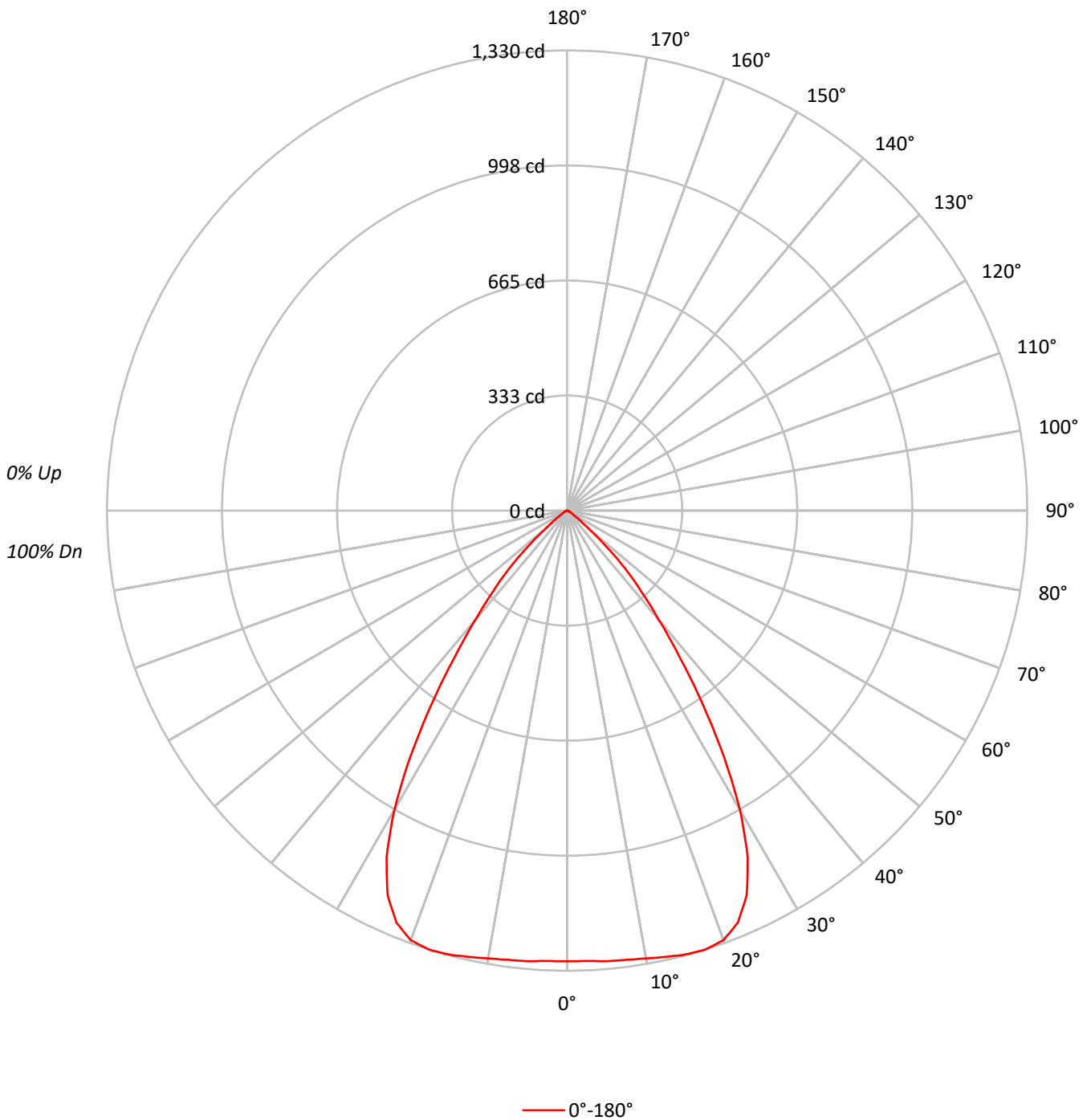
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	113	110	108	105	111	108	106	103	104	102	100		100	99	97		97	96	94	93
2	107	102	97	94	105	100	96	93	97	94	91		94	91	89		91	89	87	85
3	101	94	89	84	99	93	88	84	90	86	82		88	84	81		85	82	80	78
4	95	87	81	77	93	86	80	76	84	79	75		82	78	74		80	76	74	72
5	90	81	75	70	88	80	74	70	78	73	69		76	72	68		75	71	68	66
6	85	75	69	64	83	74	68	64	73	67	63		71	67	63		70	66	63	61
7	80	70	64	59	79	69	63	59	68	63	59		67	62	58		66	61	58	56
8	76	66	59	55	75	65	59	55	64	58	54		63	58	54		62	57	54	52
9	72	61	55	51	71	61	55	51	60	54	50		59	54	50		58	53	50	49
10	68	58	51	47	67	57	51	47	56	51	47		55	50	47		55	50	47	45

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

	0°
0°	126959
5°	127894
10°	130055
15°	133990
20°	137015
25°	131932
30°	112467
35°	81188
40°	52619
45°	32610
50°	12888
55°	4690
60°	2690
65°	1591
70°	1311
75°	866
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.9	7.3
10°-20°	375.6	22.1
20°-30°	551.9	32.4
30°-40°	427.3	25.1
40°-50°	181.3	10.6
50°-60°	31.6	1.9
60°-70°	7.9	0.5
70°-80°	2.4	0.1
80°-90°	0.0	0.0
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°	1052.4	61.8
0°-40°	1479.7	86.9
0°-60°	1692.6	99.4
0°-90°	1703.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1703.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1303	
5°	1307	125
15°	1328	376
25°	1227	552
35°	682	427
45°	237	181
55°	28	32
65°	7	8
75°	2	2
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1302.7
2.5°	1302.7
5°	1307.3
7.5°	1309.6
10°	1314.2
12.5°	1321.1
15°	1328.0
17.5°	1330.3
20°	1321.1
22.5°	1288.9
25°	1226.9
27.5°	1130.4
30°	999.4
32.5°	843.2
35°	682.4
37.5°	535.3
40°	413.6
42.5°	317.1
45°	236.6
47.5°	151.6
50°	85.0
52.5°	48.2
55°	27.6
57.5°	18.4
60°	13.8
62.5°	9.2
65°	6.9
67.5°	6.9
70°	4.6
72.5°	2.3
75°	2.3
77.5°	2.3
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)