

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P626446

Luminaire Tested: HLBC4LS9FSD2WE010MWR-3000K-600lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626446
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2209543A001)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 11/17/2022
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLBC4LS9FSD2WE010MWR-3000K-600lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

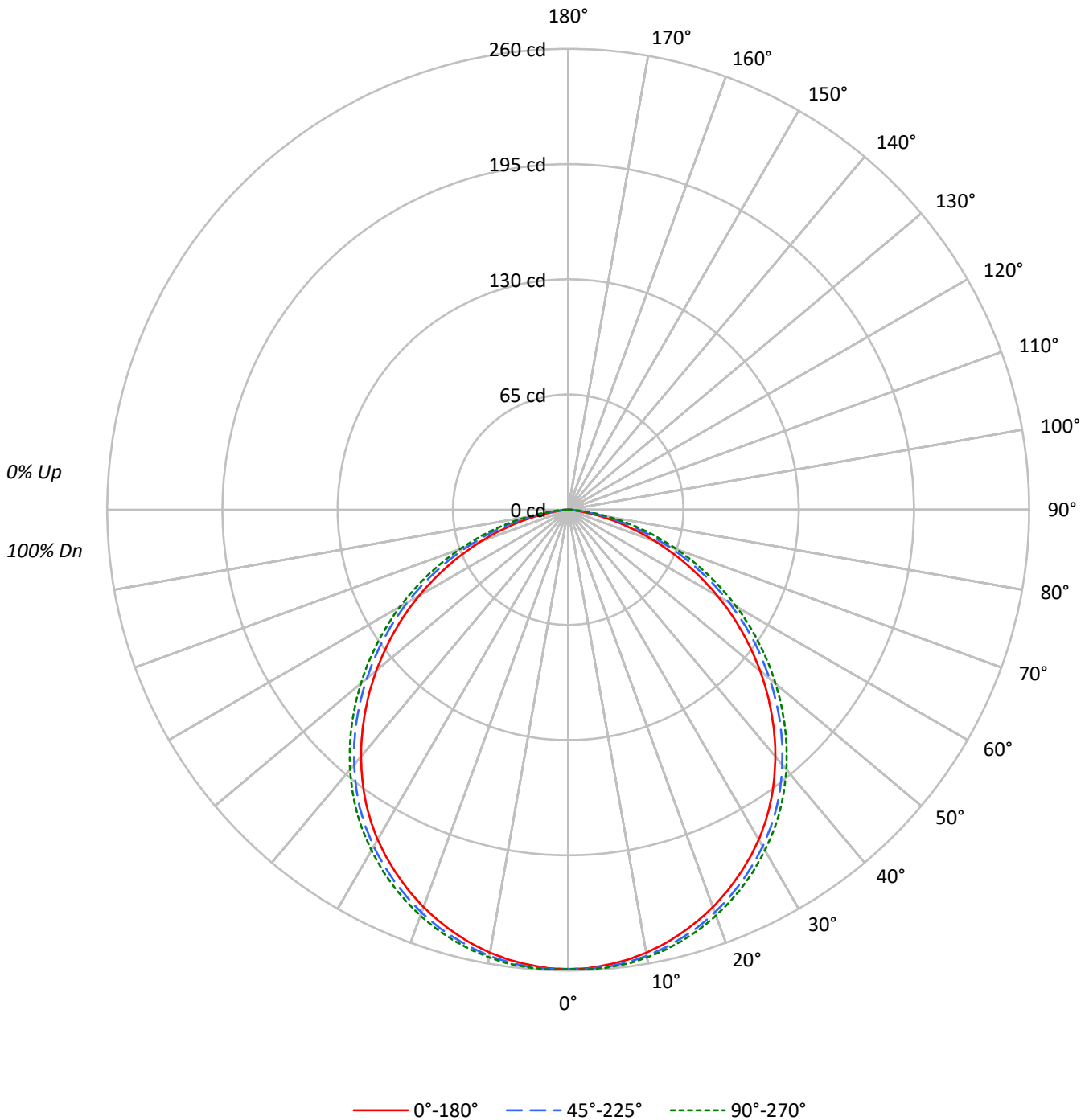
Lumens per Lamp: N/A
Luminaire Lumens: 700.0 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.36
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 8.9
Input Voltage (V): 120
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	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	63	60
4	83	72	63	57	81	70	62	56	68	61	55	66	59	55	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	33	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2976	2976	2976
5°	2970	2983	2988
10°	2959	2980	2991
15°	2940	2969	2987
20°	2915	2955	2978
25°	2883	2934	2963
30°	2849	2909	2942
35°	2798	2873	2916
40°	2725	2815	2869
45°	2632	2741	2806
50°	2522	2647	2726
55°	2392	2540	2632
60°	2232	2407	2517
65°	2027	2236	2372
70°	1759	2011	2179
75°	1397	1708	1917
80°	873	1276	1534
85°	395	580	949

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2806 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.6	3.5
10°-20°	70.4	10.1
20°-30°	106.5	15.2
30°-40°	127.7	18.2
40°-50°	129.6	18.5
50°-60°	112.7	16.1
60°-70°	80.7	11.5
70°-80°	40.4	5.8
80°-90°	7.3	1.0
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°	201.5	28.8
0°-40°	329.2	47.0
0°-60°	571.5	81.6
0°-90°	700.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	700.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	259	259	259	259	259	
5°	258	258	259	259	259	24
15°	247	249	250	250	251	70
25°	228	230	232	233	234	105
35°	200	202	205	206	208	125
45°	162	166	169	171	173	125
55°	120	123	127	129	132	107
65°	75	78	82	85	87	74
75°	32	35	38	41	43	34
85°	3	4	4	5	7	5
90°	0	0	0	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	259.2	259.2	259.2	259.2	259.2
2.5°	258.9	259.0	259.3	259.3	259.6
5°	257.7	258.2	258.8	258.8	259.2
7.5°	256.1	256.7	257.4	257.8	258.3
10°	253.8	254.6	255.6	255.9	256.5
12.5°	250.8	251.9	253.0	253.6	254.2
15°	247.3	248.6	249.8	250.5	251.3
17.5°	243.2	244.7	246.2	246.8	247.8
20°	238.6	240.3	241.8	242.7	243.7
22.5°	233.4	235.2	236.9	237.8	239.0
25°	227.6	229.7	231.6	232.6	233.9
27.5°	221.6	223.7	225.6	226.8	228.2
30°	214.9	217.2	219.4	220.5	221.9
32.5°	207.6	210.3	212.5	213.8	215.3
35°	199.6	202.4	205.0	206.4	208.0
37.5°	190.9	193.9	196.7	198.2	200.0
40°	181.8	184.9	187.8	189.5	191.4
42.5°	172.1	175.4	178.6	180.3	182.3
45°	162.1	165.6	168.8	170.7	172.8
47.5°	151.8	155.4	158.7	160.7	162.9
50°	141.2	144.9	148.2	150.4	152.6
52.5°	130.4	134.3	137.7	140.0	142.2
55°	119.5	123.3	126.9	129.2	131.5
57.5°	108.4	112.1	115.9	118.3	120.6
60°	97.2	101.0	104.8	107.2	109.6
62.5°	85.8	89.7	93.5	96.0	98.5
65°	74.6	78.5	82.3	84.8	87.3
67.5°	63.3	67.3	70.9	73.5	76.0
70°	52.4	56.2	59.9	62.4	64.9
72.5°	41.7	45.5	49.0	51.4	54.0
75°	31.5	35.1	38.5	40.8	43.2
77.5°	22.0	25.3	28.5	30.7	33.0
80°	13.2	16.2	19.3	21.3	23.2
82.5°	5.9	8.2	10.8	12.6	14.2
85°	3.0	3.7	4.4	5.3	7.2
87.5°	1.1	1.8	2.4	2.8	3.2
90°	0.0	0.1	0.5	0.9	1.3

(END OF REPORT)