

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: P626447

Luminaire Tested: HLBC4LS9FSD2WE010MWR-3000K-900lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626447
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-900lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

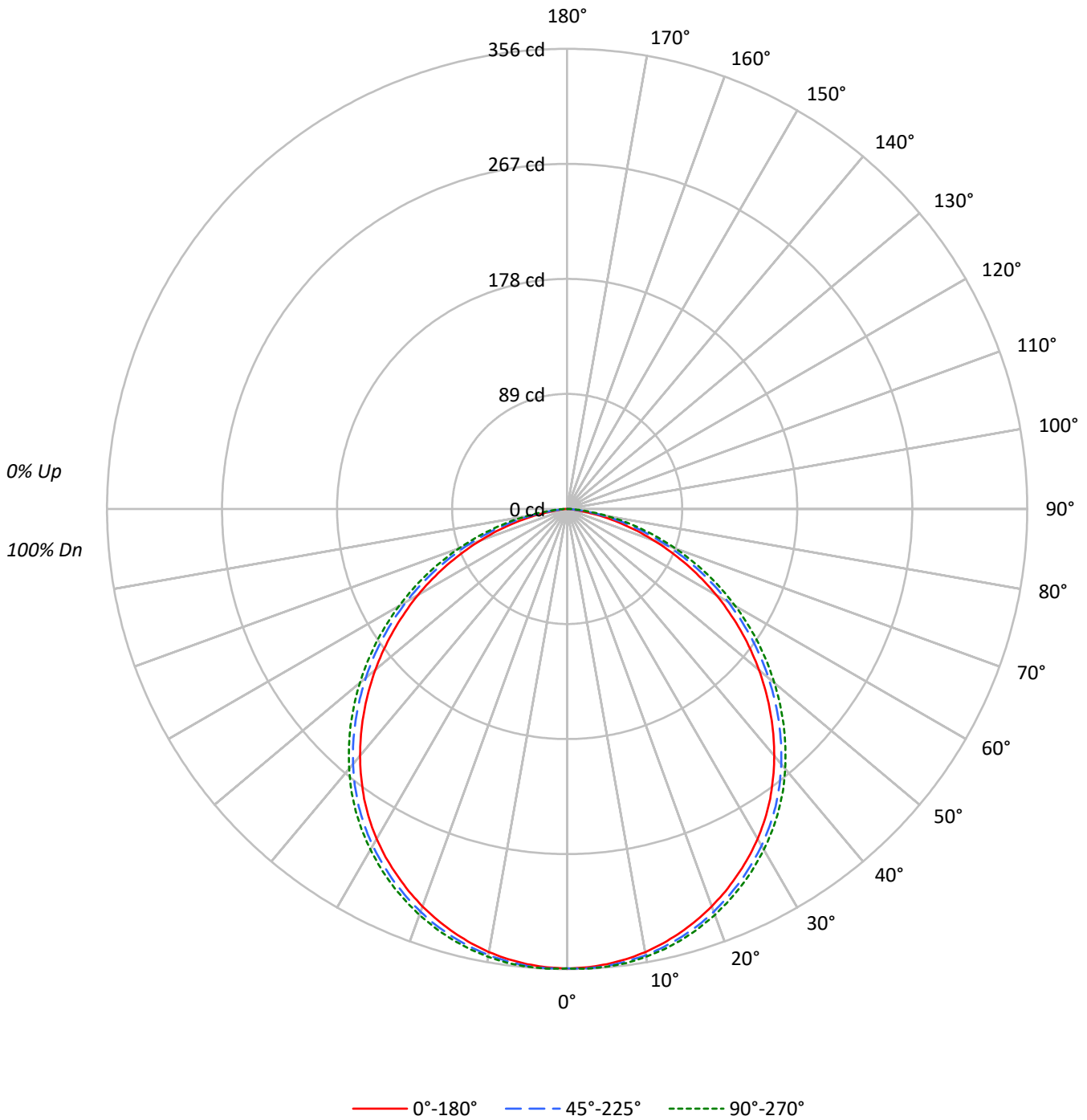
Lumens per Lamp: N/A
Luminaire Lumens: 960.0 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.36
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 13
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°	4082	4082	4082
5°	4074	4091	4096
10°	4059	4087	4102
15°	4032	4073	4098
20°	3998	4052	4084
25°	3955	4024	4063
30°	3909	3989	4035
35°	3838	3940	3998
40°	3737	3861	3933
45°	3610	3758	3848
50°	3460	3632	3739
55°	3281	3483	3609
60°	3061	3300	3452
65°	2779	3065	3252
70°	2410	2756	2988
75°	1917	2342	2631
80°	1197	1752	2103
85°	540	790	1304

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 3848 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.7	3.5
10°-20°	96.6	10.1
20°-30°	146.1	15.2
30°-40°	175.1	18.2
40°-50°	177.7	18.5
50°-60°	154.6	16.1
60°-70°	110.7	11.5
70°-80°	55.4	5.8
80°-90°	10.1	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°	276.3	28.8
0°-40°	451.5	47.0
0°-60°	783.8	81.6
0°-90°	960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	960.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	356	356	356	356	356	
5°	354	354	355	355	355	34
15°	339	341	343	344	345	96
25°	312	315	318	319	321	144
35°	274	278	281	283	285	171
45°	222	227	231	234	237	171
55°	164	169	174	177	180	146
65°	102	108	113	116	120	101
75°	43	48	53	56	59	46
85°	4	5	6	7	10	6
90°	0	0	1	1	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	355.5	355.5	355.5	355.5	355.5
2.5°	355.0	355.2	355.7	355.6	356.0
5°	353.5	354.1	354.9	355.0	355.4
7.5°	351.3	352.1	353.0	353.5	354.2
10°	348.1	349.2	350.5	350.9	351.8
12.5°	344.0	345.5	346.9	347.7	348.7
15°	339.2	340.9	342.6	343.6	344.7
17.5°	333.5	335.6	337.7	338.4	339.8
20°	327.2	329.5	331.6	332.8	334.2
22.5°	320.1	322.6	324.9	326.1	327.7
25°	312.2	315.0	317.6	318.9	320.7
27.5°	303.9	306.8	309.4	311.1	312.9
30°	294.8	297.8	300.9	302.4	304.3
32.5°	284.7	288.4	291.4	293.2	295.2
35°	273.8	277.6	281.1	283.1	285.2
37.5°	261.8	265.9	269.8	271.8	274.3
40°	249.3	253.6	257.6	259.9	262.4
42.5°	236.1	240.6	244.9	247.3	249.9
45°	222.3	227.1	231.4	234.1	237.0
47.5°	208.2	213.1	217.6	220.4	223.3
50°	193.7	198.7	203.3	206.3	209.3
52.5°	178.9	184.1	188.9	191.9	195.0
55°	163.9	169.1	174.0	177.2	180.3
57.5°	148.6	153.8	158.9	162.2	165.4
60°	133.3	138.5	143.7	147.0	150.3
62.5°	117.7	123.0	128.2	131.6	135.0
65°	102.3	107.6	112.8	116.2	119.7
67.5°	86.8	92.3	97.3	100.8	104.2
70°	71.8	77.1	82.1	85.5	89.0
72.5°	57.2	62.4	67.2	70.5	74.0
75°	43.2	48.2	52.8	56.0	59.3
77.5°	30.2	34.7	39.1	42.2	45.2
80°	18.1	22.3	26.5	29.3	31.8
82.5°	8.0	11.3	14.8	17.2	19.5
85°	4.1	5.1	6.0	7.3	9.9
87.5°	1.5	2.4	3.3	3.9	4.4
90°	0.1	0.1	0.7	1.2	1.8

(END OF REPORT)