

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: P626453

Luminaire Tested: HLBC4LS9FSD2WE010MWR-5000K-900lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626453
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-5000K-900lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

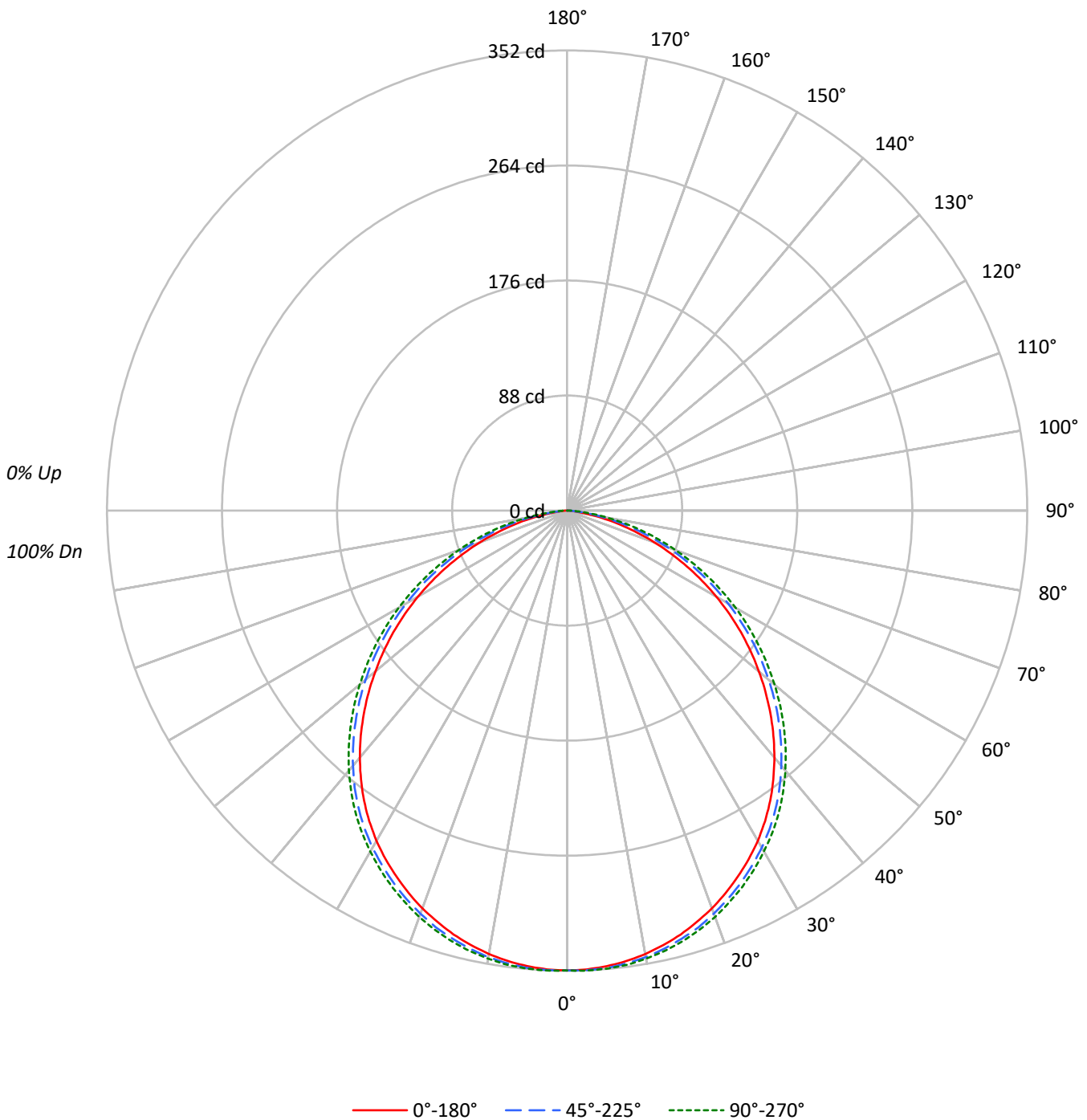
Lumens per Lamp: N/A
Luminaire Lumens: 950.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.36
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 12.9
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°	4039	4039	4039
5°	4032	4048	4054
10°	4017	4045	4059
15°	3991	4030	4055
20°	3957	4009	4042
25°	3913	3982	4021
30°	3867	3948	3992
35°	3797	3900	3956
40°	3698	3821	3893
45°	3572	3719	3808
50°	3423	3594	3699
55°	3247	3447	3573
60°	3029	3266	3415
65°	2750	3032	3217
70°	2387	2726	2954
75°	1894	2320	2604
80°	1184	1732	2076
85°	540	790	1291

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 3808 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.4	3.5
10°-20°	95.6	10.1
20°-30°	144.5	15.2
30°-40°	173.3	18.2
40°-50°	175.9	18.5
50°-60°	153.0	16.1
60°-70°	109.5	11.5
70°-80°	54.9	5.8
80°-90°	10.0	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°	273.5	28.8
0°-40°	446.8	47.0
0°-60°	775.6	81.6
0°-90°	950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	352	352	352	352	352	
5°	350	350	351	351	352	33
15°	336	337	339	340	341	95
25°	309	312	314	316	317	142
35°	271	275	278	280	282	169
45°	220	225	229	232	234	170
55°	162	167	172	175	178	145
65°	101	106	112	115	118	100
75°	43	48	52	55	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°	351.8	351.8	351.8	351.8	351.8
2.5°	351.3	351.5	351.9	351.9	352.2
5°	349.8	350.4	351.2	351.3	351.7
7.5°	347.6	348.4	349.3	349.9	350.5
10°	344.5	345.5	346.9	347.3	348.1
12.5°	340.4	341.9	343.3	344.1	345.0
15°	335.7	337.4	339.0	340.0	341.1
17.5°	330.0	332.1	334.2	334.9	336.3
20°	323.8	326.1	328.1	329.4	330.8
22.5°	316.8	319.2	321.5	322.7	324.3
25°	308.9	311.7	314.3	315.6	317.4
27.5°	300.7	303.6	306.2	307.8	309.6
30°	291.7	294.7	297.8	299.2	301.1
32.5°	281.7	285.4	288.4	290.2	292.2
35°	270.9	274.7	278.2	280.1	282.2
37.5°	259.1	263.2	267.0	269.0	271.4
40°	246.7	251.0	254.9	257.2	259.7
42.5°	233.6	238.1	242.3	244.7	247.3
45°	220.0	224.8	229.0	231.6	234.5
47.5°	206.0	210.9	215.4	218.1	221.0
50°	191.6	196.6	201.2	204.2	207.1
52.5°	177.0	182.2	186.9	189.9	192.9
55°	162.2	167.3	172.2	175.3	178.5
57.5°	147.1	152.2	157.3	160.5	163.7
60°	131.9	137.0	142.2	145.5	148.7
62.5°	116.5	121.7	126.9	130.3	133.6
65°	101.2	106.5	111.6	115.0	118.4
67.5°	85.8	91.3	96.3	99.7	103.1
70°	71.1	76.3	81.2	84.6	88.0
72.5°	56.6	61.7	66.5	69.8	73.3
75°	42.7	47.7	52.3	55.4	58.7
77.5°	29.8	34.4	38.7	41.7	44.8
80°	17.9	22.0	26.2	29.0	31.4
82.5°	8.0	11.2	14.7	17.0	19.3
85°	4.1	5.0	6.0	7.2	9.8
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)