

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: P626435

Luminaire Tested: HLBC4LS9FSD2W1EMWR-2700K-900lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626435
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2209627A001)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 11/17/2022
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLBC4LS9FSD2W1EMWR-2700K-900lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

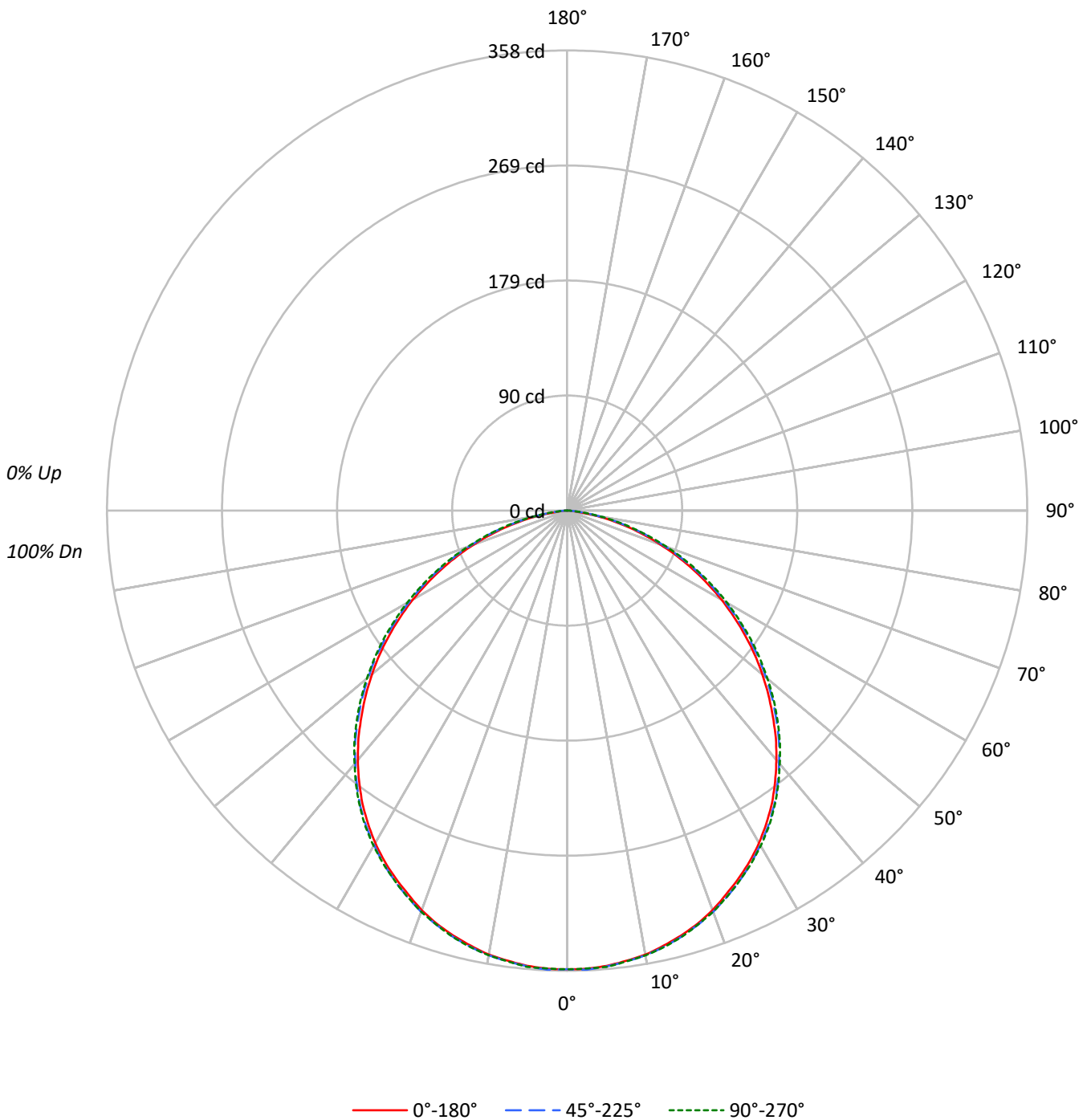
Lumens per Lamp: N/A
Luminaire Lumens: 955.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.35
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 13.1
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	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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87					85				
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	74					71				
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63					61				
4	84	72	63	57	81	71	62	56	68	61	56	66	60	55	64	58	54					52				
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47					45				
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	41					39				
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37					35				
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	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	28	52	40	33	28	39	32	27	38	32	27	37	31	27					25				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4098	4098	4098
5°	4097	4102	4107
10°	4090	4097	4096
15°	4068	4081	4083
20°	4042	4059	4058
25°	4000	4026	4025
30°	3959	3985	3993
35°	3894	3933	3942
40°	3797	3845	3858
45°	3675	3738	3762
50°	3540	3610	3635
55°	3379	3453	3489
60°	3181	3259	3305
65°	2926	3024	3070
70°	2592	2706	2770
75°	2138	2294	2351
80°	1441	1666	1739
85°	619	698	856

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3762 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.8	3.5
10°-20°	96.7	10.1
20°-30°	146.1	15.3
30°-40°	174.8	18.3
40°-50°	177.0	18.5
50°-60°	153.6	16.1
60°-70°	109.6	11.5
70°-80°	54.3	5.7
80°-90°	9.1	0.9
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°	276.7	29.0
0°-40°	451.5	47.3
0°-60°	782.0	81.9
0°-90°	955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	955.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	357	357	357	357	357	
5°	356	355	356	355	356	34
15°	342	343	343	342	344	97
25°	316	317	318	317	318	146
35°	278	279	281	280	281	173
45°	226	229	230	230	232	175
55°	169	171	172	173	174	151
65°	108	110	111	112	113	107
75°	48	50	52	52	53	51
85°	5	5	5	5	6	8
90°	0	0	0	0	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	356.9	356.9	356.9	356.9	356.9
2.5°	356.8	356.3	357.5	356.9	356.6
5°	355.5	355.4	355.9	355.4	356.3
7.5°	353.3	353.4	353.8	354.5	353.8
10°	350.8	350.5	351.4	351.1	351.3
12.5°	346.7	346.7	347.6	347.1	347.9
15°	342.2	342.6	343.3	342.5	343.5
17.5°	337.1	336.9	338.0	337.8	337.9
20°	330.8	331.0	332.2	332.2	332.1
22.5°	323.2	324.4	325.2	324.5	325.1
25°	315.7	316.6	317.8	317.0	317.7
27.5°	307.7	308.5	309.4	309.1	309.8
30°	298.6	299.6	300.6	300.1	301.2
32.5°	288.5	289.8	291.0	290.8	291.9
35°	277.8	279.2	280.6	279.9	281.2
37.5°	265.8	267.5	268.9	268.9	269.7
40°	253.3	254.9	256.5	256.7	257.4
42.5°	240.3	242.1	244.1	243.7	245.0
45°	226.3	228.6	230.2	230.3	231.7
47.5°	212.4	214.4	216.4	216.9	217.9
50°	198.2	200.0	202.1	202.4	203.5
52.5°	183.9	185.6	187.5	188.1	189.1
55°	168.8	170.7	172.5	173.1	174.3
57.5°	153.7	155.6	157.3	158.1	159.0
60°	138.5	140.5	141.9	142.8	143.9
62.5°	123.2	125.2	126.7	127.2	128.5
65°	107.7	109.6	111.3	111.8	113.0
67.5°	92.4	94.2	96.0	96.2	97.7
70°	77.2	79.1	80.6	80.9	82.5
72.5°	62.4	64.4	66.0	66.0	67.5
75°	48.2	50.2	51.7	51.7	53.0
77.5°	34.5	36.5	38.1	38.1	39.3
80°	21.8	23.6	25.2	25.4	26.3
82.5°	10.3	11.9	13.3	13.8	14.6
85°	4.7	5.1	5.3	5.4	6.5
87.5°	2.1	2.5	2.8	2.9	3.1
90°	0.1	0.1	0.3	0.5	0.8

(END OF REPORT)