

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: P626437

Luminaire Tested: HLBC4LS9FSD2W1EMWR-3000K-900lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626437
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-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

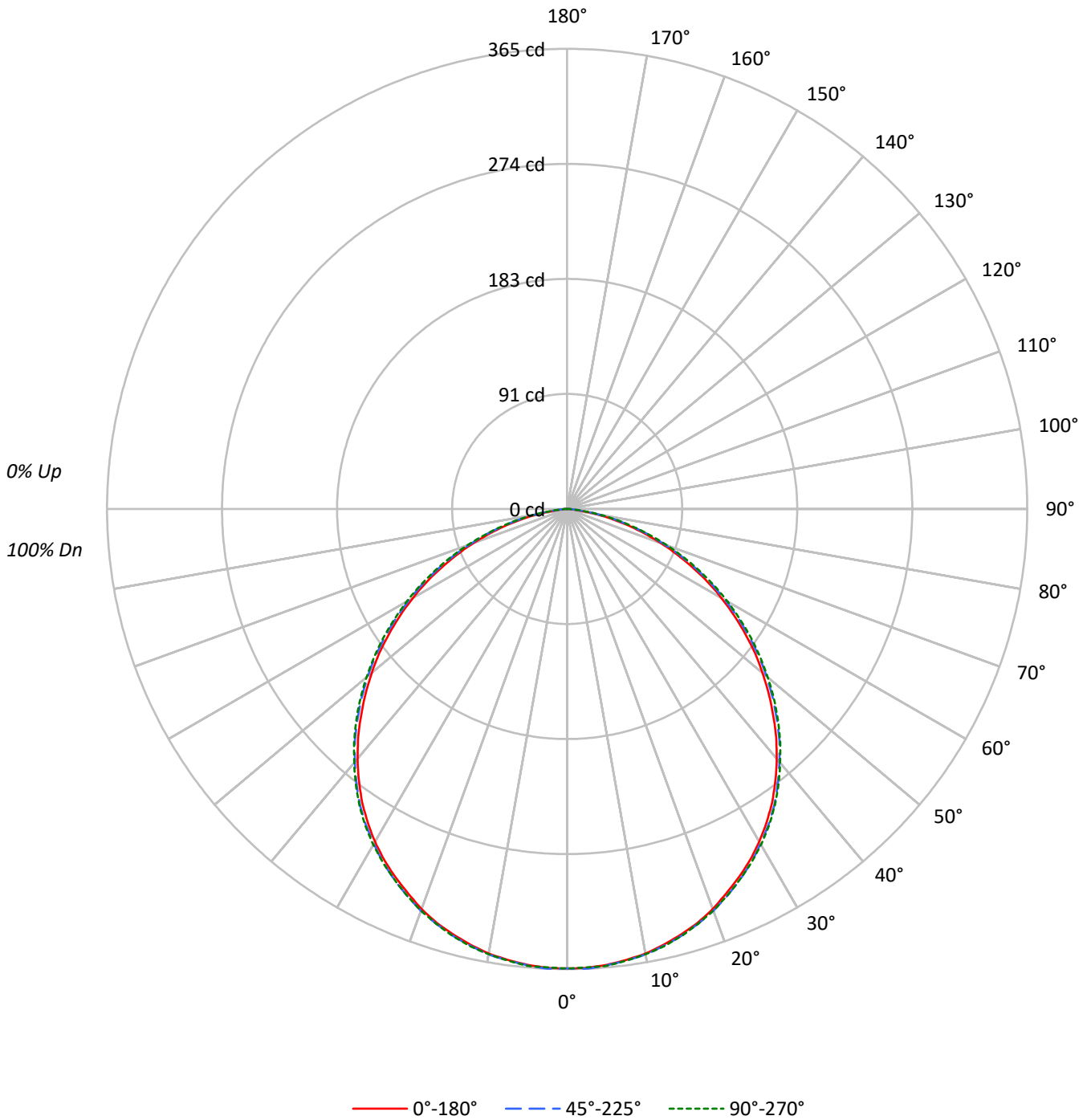
Lumens per Lamp: N/A
Luminaire Lumens: 975.0 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.35
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

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



TEST NUMBER: P626437
CATALOG NUMBER: HLBC4LS9FSD2W1EMWR-3000K-900lm

Luminous Intensity Polar Plot





TEST NUMBER: P626437

CATALOG NUMBER: HLBC4LS9FSD2W1EMWR-3000K-900lm

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	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	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°	4184	4184	4184
5°	4183	4187	4193
10°	4175	4183	4182
15°	4153	4166	4169
20°	4126	4143	4142
25°	4083	4111	4109
30°	4041	4069	4077
35°	3975	4016	4024
40°	3876	3926	3939
45°	3753	3816	3840
50°	3614	3687	3710
55°	3449	3525	3561
60°	3247	3325	3373
65°	2986	3086	3135
70°	2645	2763	2830
75°	2183	2342	2404
80°	1468	1706	1779
85°	632	711	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3840 cd/sqm



TEST NUMBER: P626437

CATALOG NUMBER: HLBC4LS9FSD2W1EMWR-3000K-900lm

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	3.5
10°-20°	98.8	10.1
20°-30°	149.2	15.3
30°-40°	178.5	18.3
40°-50°	180.7	18.5
50°-60°	156.8	16.1
60°-70°	111.9	11.5
70°-80°	55.4	5.7
80°-90°	9.3	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°	282.4	29.0
0°-40°	460.9	47.3
0°-60°	798.4	81.9
0°-90°	975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	975.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	363	363	363	363	364	34
15°	349	350	350	350	351	99
25°	322	323	324	324	324	149
35°	284	285	286	286	287	177
45°	231	233	235	235	236	178
55°	172	174	176	177	178	154
65°	110	112	114	114	115	109
75°	49	51	53	53	54	52
85°	5	5	5	6	7	8
90°	0	0	0	0	1	



TEST NUMBER: P626437

CATALOG NUMBER: HLBC4LS9FSD2W1EMWR-3000K-900lm

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	364.4	364.4	364.4	364.4	364.4
2.5°	364.3	363.7	365.0	364.3	364.0
5°	362.9	362.9	363.3	362.9	363.8
7.5°	360.7	360.8	361.2	361.9	361.2
10°	358.1	357.8	358.8	358.5	358.7
12.5°	354.0	354.0	354.9	354.3	355.2
15°	349.4	349.8	350.5	349.6	350.7
17.5°	344.2	344.0	345.1	344.9	345.0
20°	337.7	338.0	339.1	339.2	339.0
22.5°	329.9	331.2	332.0	331.3	331.9
25°	322.3	323.2	324.5	323.6	324.3
27.5°	314.1	315.0	315.9	315.5	316.3
30°	304.8	305.9	306.9	306.4	307.5
32.5°	294.6	295.9	297.1	296.8	298.0
35°	283.6	285.0	286.5	285.8	287.1
37.5°	271.4	273.1	274.5	274.5	275.4
40°	258.6	260.3	261.9	262.1	262.8
42.5°	245.3	247.1	249.3	248.8	250.1
45°	231.1	233.4	235.0	235.2	236.5
47.5°	216.9	218.9	220.9	221.5	222.5
50°	202.3	204.2	206.4	206.6	207.7
52.5°	187.8	189.4	191.4	192.1	193.1
55°	172.3	174.3	176.1	176.7	177.9
57.5°	156.9	158.9	160.5	161.4	162.3
60°	141.4	143.4	144.8	145.8	146.9
62.5°	125.8	127.8	129.4	129.8	131.2
65°	109.9	111.9	113.6	114.1	115.4
67.5°	94.3	96.2	98.0	98.2	99.8
70°	78.8	80.8	82.3	82.6	84.3
72.5°	63.7	65.8	67.4	67.4	68.9
75°	49.2	51.2	52.8	52.8	54.2
77.5°	35.2	37.3	38.9	38.8	40.1
80°	22.2	24.1	25.8	26.0	26.9
82.5°	10.5	12.2	13.5	14.1	14.9
85°	4.8	5.2	5.4	5.5	6.7
87.5°	2.1	2.5	2.9	3.0	3.2
90°	0.1	0.1	0.3	0.5	0.8

(END OF REPORT)