

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: P626444

Luminaire Tested: HLBC4LS9FSD2WE010MWR-2700K-600lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626444
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-2700K-600lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

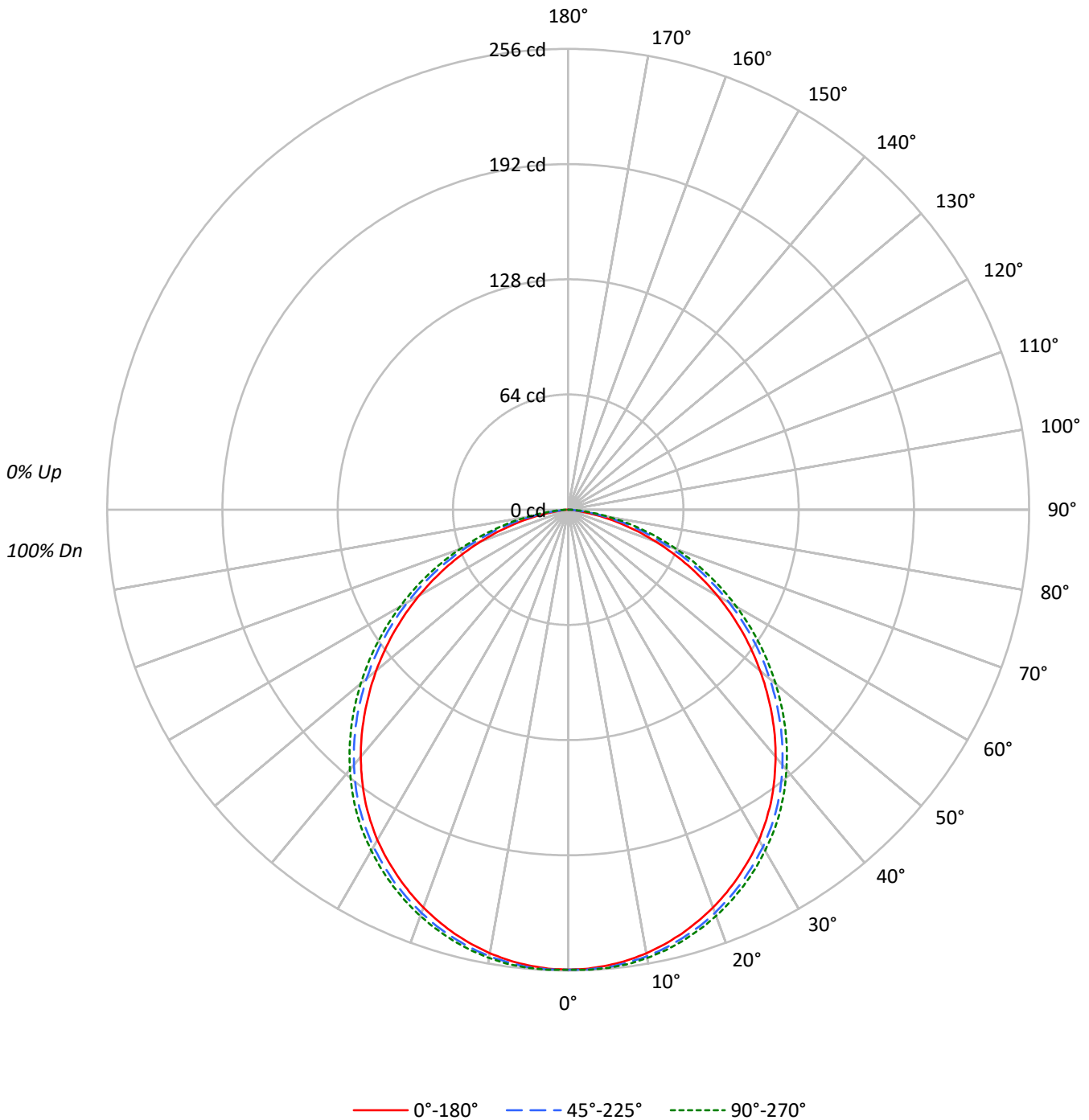
Lumens per Lamp: N/A
Luminaire Lumens: 690.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.36
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 8.8
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°	2934	2934	2934
5°	2929	2940	2945
10°	2917	2937	2949
15°	2898	2927	2944
20°	2874	2912	2935
25°	2843	2892	2920
30°	2809	2868	2900
35°	2759	2833	2873
40°	2686	2774	2827
45°	2595	2700	2765
50°	2487	2610	2687
55°	2358	2504	2594
60°	2200	2372	2480
65°	1997	2203	2337
70°	1732	1981	2145
75°	1375	1686	1890
80°	860	1256	1508
85°	382	566	935

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 2765 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	3.5
10°-20°	69.4	10.1
20°-30°	105.0	15.2
30°-40°	125.9	18.2
40°-50°	127.7	18.5
50°-60°	111.1	16.1
60°-70°	79.6	11.5
70°-80°	39.8	5.8
80°-90°	7.2	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°	198.6	28.8
0°-40°	324.5	47.0
0°-60°	563.3	81.6
0°-90°	690.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	690.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	254	254	255	255	256	24
15°	244	245	246	247	248	69
25°	224	226	228	229	230	103
35°	197	200	202	203	205	123
45°	160	163	166	168	170	123
55°	118	122	125	127	130	105
65°	74	77	81	84	86	73
75°	31	35	38	40	43	33
85°	3	4	4	5	7	4
90°	0	0	0	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	255.5	255.5	255.5	255.5	255.5
2.5°	255.2	255.3	255.6	255.6	255.8
5°	254.1	254.5	255.1	255.1	255.5
7.5°	252.5	253.1	253.7	254.1	254.6
10°	250.2	251.0	251.9	252.2	252.9
12.5°	247.3	248.3	249.4	249.9	250.6
15°	243.8	245.0	246.2	246.9	247.7
17.5°	239.7	241.2	242.7	243.2	244.2
20°	235.2	236.9	238.3	239.2	240.2
22.5°	230.1	231.9	233.5	234.4	235.6
25°	224.4	226.4	228.3	229.2	230.5
27.5°	218.4	220.5	222.4	223.6	224.9
30°	211.9	214.1	216.3	217.3	218.7
32.5°	204.6	207.3	209.5	210.8	212.2
35°	196.8	199.5	202.1	203.4	205.0
37.5°	188.2	191.1	193.9	195.4	197.1
40°	179.2	182.3	185.1	186.8	188.6
42.5°	169.7	172.9	176.0	177.7	179.7
45°	159.8	163.3	166.3	168.2	170.3
47.5°	149.6	153.2	156.4	158.4	160.5
50°	139.2	142.8	146.1	148.3	150.4
52.5°	128.6	132.3	135.8	138.0	140.1
55°	117.8	121.5	125.1	127.3	129.6
57.5°	106.8	110.5	114.2	116.6	118.9
60°	95.8	99.5	103.3	105.7	108.0
62.5°	84.6	88.4	92.2	94.6	97.1
65°	73.5	77.4	81.1	83.5	86.0
67.5°	62.4	66.3	69.9	72.4	74.9
70°	51.6	55.4	59.0	61.5	63.9
72.5°	41.1	44.8	48.3	50.7	53.2
75°	31.0	34.6	38.0	40.3	42.6
77.5°	21.7	25.0	28.1	30.3	32.5
80°	13.0	16.0	19.0	21.0	22.8
82.5°	5.8	8.1	10.7	12.4	14.0
85°	2.9	3.6	4.3	5.2	7.1
87.5°	1.1	1.7	2.4	2.8	3.2
90°	0.0	0.1	0.5	0.9	1.3

(END OF REPORT)