

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 COMMERCIAL

Report Number: P838286

Luminaire Tested: HCSQ605D010-HM60525935-61SQLWW

Issue Date: 5/21/2024

**Test Information**

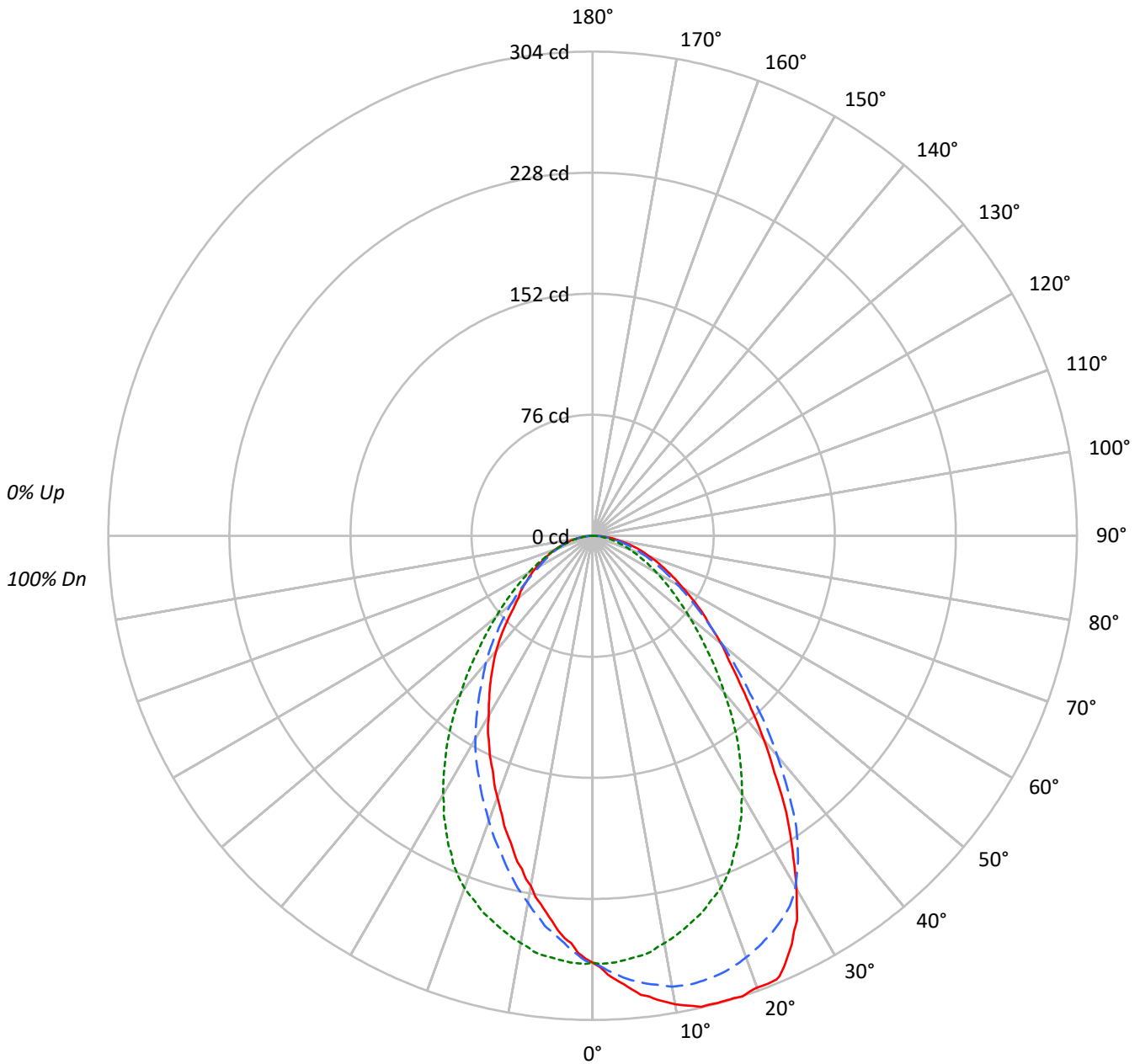
Test Method: LM-79-2019  
Report Number: P838286  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ605D010-HM60525935-61SQLWW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 506.8 lumens  
Efficiency: N/A  
Efficacy: 84.5 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 24 FT

TEST NUMBER: P838286  
CATALOG NUMBER: HCSQ605D010-HM60525935-61SQLWW

### Luminous Intensity Polar Plot





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CATALOG NUMBER: HCSQ605D010-HM60525935-61SQLWW

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	25963	25963	25963	25963	25963
5°	27822	27248	25926	24584	24195
10°	29383	28281	25547	22999	21956
15°	30449	28809	24953	21322	19968
20°	31113	29046	24258	19639	18010
25°	31041	29042	22907	18000	16311
30°	28626	28486	20997	16466	14576
35°	25048	26349	18804	14724	13198
40°	21157	22807	16250	13177	11900
45°	17893	19105	13919	11563	10412
50°	15870	16021	11936	10083	9163
55°	14204	13714	10320	8681	8631
60°	12671	11954	9009	7498	8118
65°	11645	10613	7817	6968	7427
70°	10735	9503	6911	6515	6911
75°	10106	8478	6026	5914	6326
80°	9261	7615	5300	5467	5746
85°	9226	6836	4446	4446	5113

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 45°  
 Luminance: 19263 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.3	5.0
10°-20°	70.5	13.9
20°-30°	100.5	19.8
30°-40°	103.6	20.4
40°-50°	83.4	16.5
50°-60°	59.0	11.6
60°-70°	38.2	7.5
70°-80°	20.5	4.1
80°-90°	5.9	1.2
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°	196.2	38.7
0°-40°	299.8	59.2
0°-60°	442.1	87.2
0°-90°	506.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	506.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	268	268	268	268	268	
5°	286	280	267	253	249	28
15°	304	287	249	213	199	86
25°	290	272	214	168	153	132
35°	212	223	159	124	112	131
45°	131	139	102	84	76	102
55°	84	81	61	51	51	75
65°	51	46	34	30	32	51
75°	27	23	16	16	17	29
85°	8	6	4	4	5	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	268.0	268.0	268.0	268.0	268.0	268.0	268.0	268.0	268.0	268.0	268.0
1°	270.9	272.0	271.1	271.1	270.3	270.0	270.6	269.7	269.4	268.9	267.7
2°	275.7	274.9	274.6	274.9	273.2	273.2	272.3	270.6	269.7	268.6	265.4
3°	279.2	278.6	278.0	277.7	276.0	274.6	273.4	271.4	269.7	268.3	263.7
4°	282.3	282.3	281.8	280.6	278.9	277.2	274.9	272.6	270.0	267.4	261.4
5°	286.1	286.4	283.8	283.5	281.5	278.9	276.3	273.2	270.0	266.6	260.0
6°	289.8	288.4	287.8	285.8	282.9	280.6	277.5	274.0	269.7	265.7	256.8
7°	291.5	291.2	289.8	287.8	285.2	281.5	278.3	273.7	269.1	265.1	254.5
8°	294.4	294.4	292.7	290.1	286.4	282.9	278.9	273.4	268.9	263.7	251.3
9°	296.4	296.4	294.1	291.8	288.4	283.8	279.2	273.2	267.4	261.4	248.5
10°	298.7	298.1	296.4	293.0	290.1	284.9	279.2	272.9	266.6	259.7	245.6
11°	300.4	299.6	297.5	295.0	290.4	285.2	279.2	272.9	265.4	257.9	242.7
12°	301.8	301.3	298.7	295.5	290.9	285.8	278.9	271.7	263.4	255.7	239.0
13°	303.6	301.8	299.3	296.4	291.2	285.2	277.7	270.0	262.0	253.6	235.9
14°	303.3	303.0	300.7	296.7	290.9	284.6	277.5	268.3	260.0	251.3	232.1
15°	303.6	303.3	300.7	297.0	290.7	283.8	276.6	267.1	257.9	248.8	228.4
16°	303.6	303.6	300.1	296.4	290.4	282.9	274.9	266.0	255.9	246.8	225.2
17°	303.6	303.6	300.7	295.5	289.5	282.3	273.2	263.7	253.6	243.9	220.6
18°	304.1	303.3	299.6	295.2	288.4	280.9	272.0	262.0	251.6	240.7	217.5
19°	302.7	302.1	299.0	293.5	287.5	279.2	270.3	260.0	249.6	238.1	213.8
20°	301.8	302.7	298.4	292.7	285.8	277.7	268.6	257.9	246.8	235.3	210.0
21°	302.1	301.8	297.3	291.2	284.6	275.7	266.6	255.7	243.6	231.8	206.6
22.5°	301.6	300.7	295.8	289.2	281.2	273.2	263.1	251.9	239.0	225.8	200.0
23°	300.4	299.6	295.8	288.6	280.0	272.0	261.4	249.6	237.3	223.8	198.3
24°	295.8	295.5	293.8	286.6	278.6	269.7	259.4	245.9	232.1	218.1	194.0
25°	290.4	290.9	290.1	285.5	276.3	267.1	256.2	241.3	227.2	214.3	188.8
26°	285.2	285.2	284.6	282.9	274.0	264.3	251.6	235.9	222.4	208.9	183.3
27°	278.6	279.8	278.6	277.7	271.7	261.1	246.8	232.1	216.9	203.7	178.8
28°	273.4	273.4	272.9	271.4	269.4	257.4	241.6	226.7	211.8	199.1	173.6
29°	264.3	266.0	266.3	266.6	266.3	252.5	236.7	220.6	206.3	192.5	168.7
30°	255.9	257.7	258.8	260.8	261.1	248.2	231.0	215.8	201.1	187.7	164.4
32.5°	233.3	236.4	239.6	243.0	244.7	235.3	216.9	200.3	185.4	173.3	151.2
35°	211.8	212.6	216.1	224.1	225.8	219.8	200.3	184.5	170.4	159.0	138.9
37.5°	187.4	189.1	194.0	203.1	203.7	198.8	185.4	167.0	153.8	143.8	126.2
40°	167.3	168.1	171.6	179.3	181.9	178.8	167.0	150.3	138.3	128.5	114.2
42.5°	147.2	148.3	152.6	158.7	162.4	158.7	148.3	134.0	122.2	115.1	102.7
45°	130.6	132.0	136.0	139.4	140.6	138.3	129.1	117.4	109.0	101.6	92.1
47.5°	116.2	117.6	120.5	121.9	123.4	121.1	113.9	104.2	95.8	89.8	81.2
50°	105.3	105.0	107.0	107.6	107.6	105.0	99.0	91.0	84.1	79.2	72.0
52.5°	93.0	93.5	95.0	94.4	94.1	91.8	86.7	79.8	74.0	69.7	63.1
55°	84.1	83.2	84.1	83.5	82.3	80.1	75.5	69.7	64.8	61.1	55.1
57.5°	74.3	74.3	74.6	73.5	72.0	69.4	65.4	60.8	56.5	53.4	48.5
60°	65.4	66.0	65.7	64.6	63.1	60.3	57.1	52.5	48.8	46.5	41.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	44.5	44.5	43.6	42.8	40.7	38.2	35.9	33.0	31.0	29.0	26.1
70°	37.9	38.4	37.3	35.9	34.4	32.7	30.1	27.8	25.8	24.4	22.1
72.5°	32.7	32.4	31.6	30.1	29.0	27.0	24.7	23.0	21.2	20.1	18.4
75°	27.0	27.0	26.1	25.0	23.5	21.8	20.1	18.7	17.2	16.1	15.2
77.5°	21.5	21.8	20.9	20.1	18.9	17.2	15.8	14.6	13.5	12.6	12.1
80°	16.6	16.9	16.1	15.5	14.1	13.2	12.1	10.9	10.0	9.5	9.2
82.5°	12.6	12.3	11.8	11.5	10.3	9.5	8.3	7.7	7.2	6.6	6.6
85°	8.3	8.0	7.7	7.5	6.6	5.7	5.5	4.9	4.3	4.0	4.0
87.5°	4.3	4.3	4.0	3.7	3.4	2.9	2.6	2.0	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	268.0	268.0	268.0
1°	266.8	265.7	265.4
2°	263.4	261.7	262.0
3°	260.2	258.2	256.2
4°	256.2	253.1	253.1
5°	252.8	249.6	248.8
6°	249.6	244.5	243.3
7°	246.8	240.4	238.4
8°	241.9	235.6	233.6
9°	238.4	231.6	229.5
10°	233.8	227.0	223.2
11°	230.1	222.4	219.5
12°	226.1	216.6	213.8
13°	221.5	211.8	210.0
14°	217.2	207.7	204.6
15°	212.6	202.9	199.1
16°	207.7	198.0	194.5
17°	203.7	192.8	190.2
18°	199.7	188.2	184.2
19°	194.8	183.9	179.3
20°	190.5	178.5	174.7
21°	185.9	174.5	170.4
22.5°	179.6	166.7	163.0
23°	177.6	164.4	160.4
24°	173.0	159.8	156.4
25°	168.4	156.4	152.6
26°	164.4	151.2	147.8
27°	160.4	147.2	143.5
28°	156.1	142.9	140.0
29°	151.8	138.3	135.4
30°	147.2	135.1	130.3
32.5°	135.7	124.8	120.8
35°	124.5	115.1	111.6
37.5°	113.6	105.9	102.7
40°	104.2	97.3	94.1
42.5°	94.4	88.1	84.9
45°	84.4	79.2	76.0
47.5°	75.2	70.9	67.4
50°	66.9	62.6	60.8
52.5°	58.8	56.0	56.8
55°	51.4	51.4	51.1
57.5°	44.2	46.2	46.5
60°	38.7	41.3	41.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	26.7	28.1	28.7
70°	23.0	24.1	24.4
72.5°	19.5	20.4	20.9
75°	15.8	16.9	16.9
77.5°	12.9	13.5	13.8
80°	9.8	10.0	10.3
82.5°	6.9	7.2	7.5
85°	4.0	4.3	4.6
87.5°	1.7	1.7	1.7
90°	0.0	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°

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Scaled Data Report





62.5°	58.0	58.5	57.7	56.2	54.8	52.2	49.4	45.3	42.5	40.2	36.2
65°	50.8	51.1	50.5	49.1	47.6	45.0	42.2	38.7	36.4	34.1	30.7

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Scaled Data Report



62.5°	34.7	36.7	37.0
65°	30.4	32.1	32.4

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Scaled Data Report



(END OF REPORT)