

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: P837425

Luminaire Tested: HCSQ425D010-HM40525935-41SQLWW

Issue Date: 5/17/2024

**Test Information**

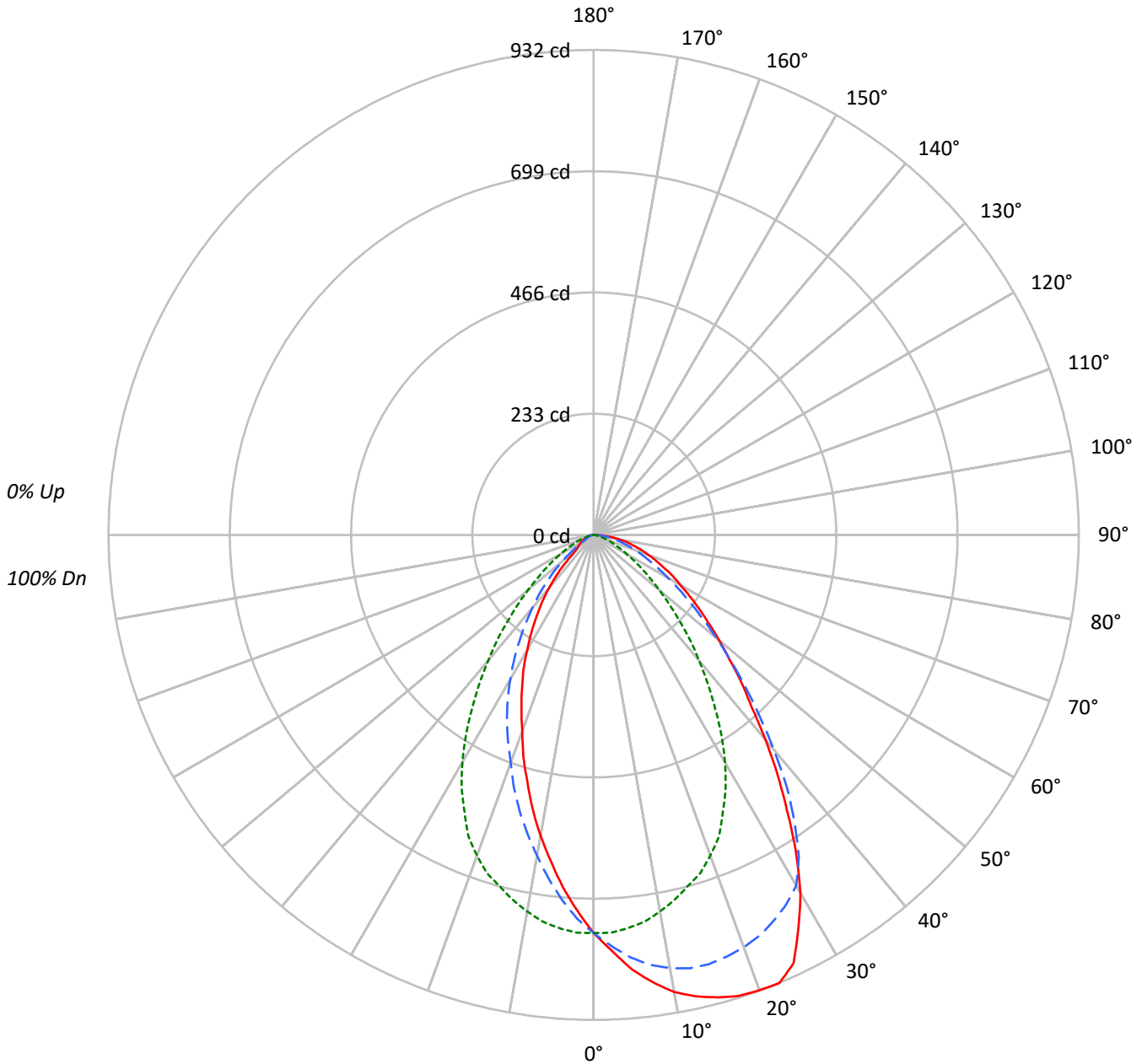
Test Method: LM-79-2019  
Report Number: P837425  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ425D010-HM40525935-41SQLWW  
Description: HALO COMMERCIAL 4" 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: 1237.5 lumens  
Efficiency: N/A  
Efficacy: 44.7 lumens/watt  
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.7  
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

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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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89					89			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78					78			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69					69			
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55					55			
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45					45			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42					42			
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35					35			

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

	0°	45°	90°	135°	180°
0°	74110	74110	74110	74110	74110
5°	81463	79255	73761	68383	66059
10°	87746	83152	72272	61589	57753
15°	92289	85650	70085	55071	49304
20°	95990	86928	67567	47990	41392
25°	97088	87458	62755	42104	34793
30°	88852	87040	56446	35807	28525
35°	76611	79437	48121	29388	22588
40°	64913	67935	39798	23193	16883
45°	55007	56349	31812	17249	10851
50°	47429	46283	24702	11605	6541
55°	41785	38120	18883	6418	5861
60°	37220	31950	14086	3565	5251
65°	34086	27370	10453	3232	4722
70°	31667	23679	7676	3087	4617
75°	29644	20699	5278	2845	4080
80°	28452	18187	3626	3013	3626
85°	27788	15672	2445	2445	2445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 57240 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.7	5.8
10°-20°	197.5	16.0
20°-30°	276.1	22.3
30°-40°	269.9	21.8
40°-50°	195.9	15.8
50°-60°	118.1	9.5
60°-70°	66.4	5.4
70°-80°	32.9	2.7
80°-90°	9.0	0.7
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°	545.4	44.1
0°-40°	815.3	65.9
0°-60°	1129.2	91.3
0°-90°	1237.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1237.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	765	765	765	765	765	
5°	838	815	758	703	679	81
15°	920	854	699	549	492	261
25°	908	818	587	394	326	409
35°	648	672	407	248	191	406
45°	402	411	232	126	79	311
55°	247	226	112	38	35	223
65°	149	119	46	14	21	149
75°	79	55	14	8	11	85
85°	25	14	2	2	2	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	765.0	765.0	765.0	765.0	765.0	765.0	765.0	765.0	765.0
2.5°	799.8	797.6	791.1	778.1	765.0	749.8	737.9	729.2	722.7
5°	837.7	833.4	815.0	787.8	758.5	729.2	703.2	688.0	679.3
7.5°	867.0	859.4	833.4	795.4	749.8	705.4	665.2	641.3	631.6
10°	892.0	879.0	845.3	794.3	734.7	676.1	626.1	597.9	587.1
12.5°	908.3	894.2	852.9	793.3	718.4	646.8	588.2	551.3	540.4
15°	920.2	902.9	854.0	784.6	698.8	616.4	549.1	505.7	491.6
17.5°	928.9	905.0	849.7	774.8	681.5	584.9	508.9	462.3	448.2
20°	931.1	905.0	843.2	760.7	655.4	553.4	465.5	418.9	401.5
22.5°	932.2	901.8	833.4	743.3	628.3	517.6	429.7	380.9	362.4
25°	908.3	890.9	818.2	714.0	587.1	478.6	393.9	340.7	325.5
27.5°	851.9	850.8	800.8	675.0	549.1	436.2	357.0	306.0	291.9
30°	794.3	795.4	778.1	631.6	504.6	396.1	320.1	270.2	255.0
32.5°	723.8	734.7	733.6	582.7	456.9	358.1	284.3	237.7	222.5
35°	647.8	667.4	671.7	527.4	406.9	314.7	248.5	206.2	191.0
37.5°	579.5	599.0	608.8	478.6	360.3	276.7	214.9	178.0	162.8
40°	513.3	529.6	537.2	422.1	314.7	237.7	183.4	148.7	133.5
42.5°	449.3	473.1	471.0	374.4	274.5	206.2	155.2	120.5	105.3
45°	401.5	417.8	411.3	324.5	232.2	173.6	125.9	93.3	79.2
47.5°	353.8	365.7	355.9	282.1	196.4	143.2	102.0	68.4	53.2
50°	314.7	320.1	307.1	239.8	163.9	117.2	77.0	45.6	43.4
52.5°	277.8	281.1	262.6	204.0	135.6	94.4	56.4	35.8	38.0
55°	247.4	246.3	225.7	172.5	111.8	72.7	38.0	32.6	34.7
57.5°	218.1	214.9	194.2	143.2	91.2	56.4	22.8	28.2	30.4
60°	192.1	188.8	164.9	118.3	72.7	42.3	18.4	25.0	27.1
62.5°	171.5	163.9	140.0	97.7	58.6	30.4	16.3	21.7	23.9
65°	148.7	142.2	119.4	79.2	45.6	21.7	14.1	18.4	20.6
67.5°	130.2	122.6	100.9	65.1	36.9	15.2	13.0	16.3	18.4
70°	111.8	105.3	83.6	52.1	27.1	9.8	10.9	14.1	16.3
72.5°	96.6	89.0	69.5	41.2	20.6	7.6	9.8	11.9	13.0
75°	79.2	72.7	55.3	31.5	14.1	6.5	7.6	9.8	10.9
77.5°	66.2	59.7	43.4	23.9	9.8	5.4	6.5	8.7	8.7
80°	51.0	45.6	32.6	16.3	6.5	3.3	5.4	6.5	6.5
82.5°	36.9	32.6	22.8	10.9	3.3	3.3	3.3	4.3	4.3
85°	25.0	21.7	14.1	6.5	2.2	2.2	2.2	2.2	2.2
87.5°	14.1	10.9	6.5	2.2	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	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



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Scaled Data Report







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

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