

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P21974

Luminaire Tested: **PA6-6AC_11PAR30LED**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: P21974
Test Lab: INNOVATION CENTER P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PA6-6AC_11PAR30LED
Description: HALO 6-INCH APERTURE OPEN DOWNLIGHT, ADJUSTABLE PAR LED LAMP
Light Source: (1) PHILIPS LED PAR30S LAMP 2700K
11EPAR30S-E
Ballast/Driver: (1) CHROMA POWER SUPPLY
CHROMA IN0061

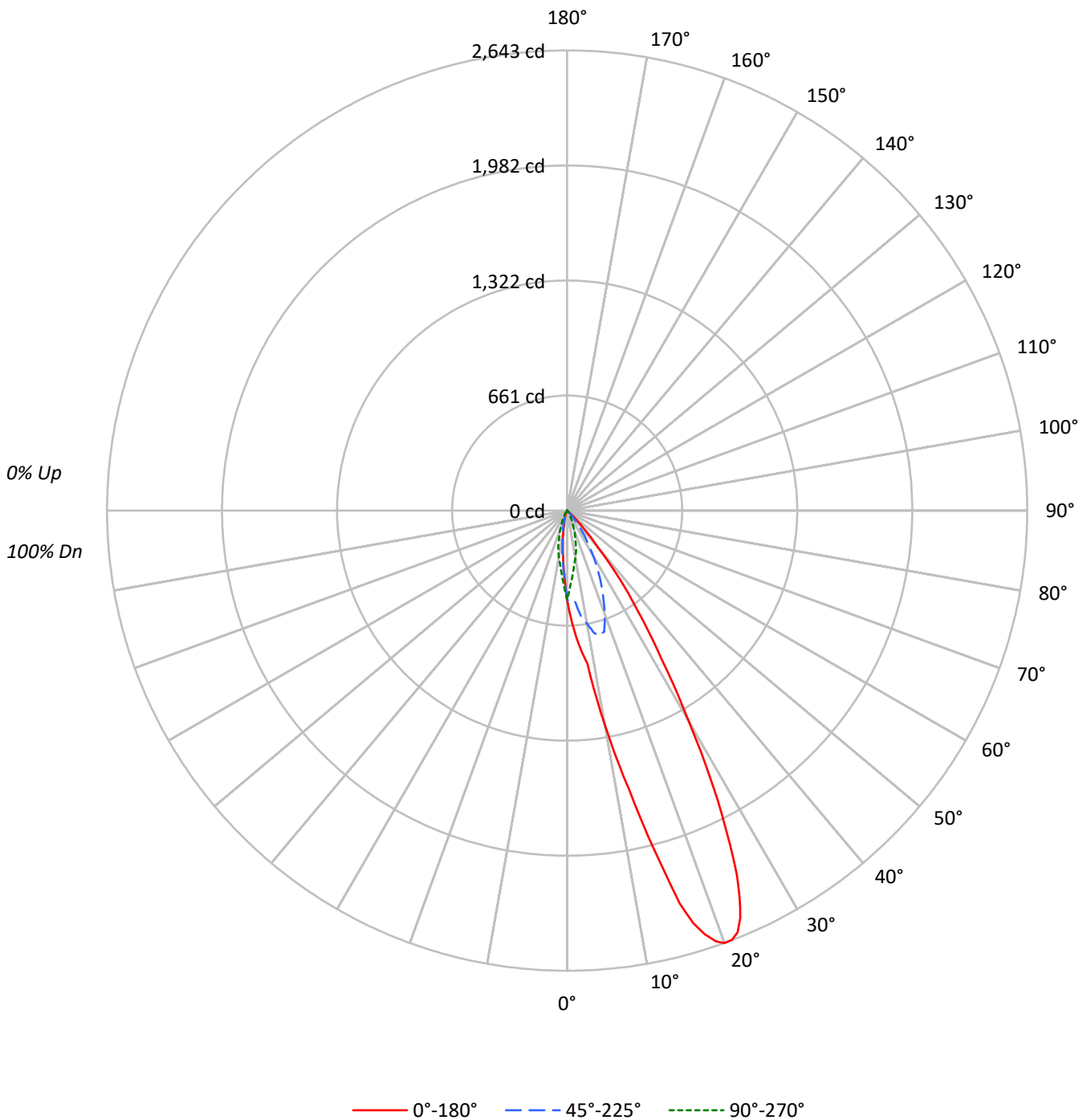
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 474.9 lumens
Efficiency: N/A
Efficacy: 47.0 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 0.36 / 0.75
Luminous Opening: Vertical Cylinder (Dia: 0.54' x H: 0.1')
CIE Type: Direct

Input Watts (W): 10.1
Input Voltage (V): NR
Input Current (Ain): 0.1004
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	114	111	109	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	96	91	88	93	89	86	91	88	85	88	86	84	82
4	98	91	86	82	96	90	85	81	88	83	80	86	82	79	84	81	78	77
5	93	85	80	76	92	84	79	75	83	78	75	81	77	74	80	76	73	72
6	89	80	75	70	87	80	74	70	78	73	70	77	72	69	75	72	69	67
7	85	76	70	66	83	75	70	66	74	69	65	73	68	65	71	68	65	63
8	81	71	66	62	79	71	65	62	70	65	61	69	64	61	68	64	61	59
9	77	68	62	58	76	67	62	58	66	61	58	65	61	57	64	60	57	56
10	73	64	58	55	72	63	58	54	63	58	54	62	57	54	61	57	54	53

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	23963	23963	23963
5°	35469	16724	12267
10°	57066	12479	5830
15°	96855	8553	2775
20°	121025	5220	1374
25°	107156	2973	604
30°	66203	1520	237
35°	35058	783	0
40°	14006	255	0
45°	4065	53	0
50°	114	0	0
55°	0	0	0
60°	0	66	0
65°	0	73	0
70°	0	83	0
75°	0	96	0
80°	0	115	0
85°	0	145	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.4	8.7
10°-20°	148.1	31.2
20°-30°	184.6	38.9
30°-40°	85.2	17.9
40°-50°	13.8	2.9
50°-60°	0.2	0.0
60°-70°	0.6	0.1
70°-80°	0.7	0.1
80°-90°	0.4	0.1
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°	374.0	78.8
0°-40°	459.2	96.7
0°-60°	473.3	99.7
0°-90°	474.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	474.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	513	513	513	513	513	
5°	772	524	364	284	267	85
15°	2129	742	188	79	61	610
25°	2307	459	64	20	13	1000
35°	716	164	16	3	0	467
45°	76	15	1	0	0	78
55°	0	0	0	0	0	0
65°	0	1	1	0	0	0
75°	0	0	1	0	0	0
85°	0	0	1	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	513	513	513	513	513	513	513	513	513	513	513
2.5°	642	639	638	636	632	627	621	615	602	531	474
5°	772	766	756	745	732	719	706	692	658	524	436
7.5°	886	878	877	871	860	849	837	825	792	615	431
10°	1253	1240	1232	1215	1191	1162	1130	1096	1019	659	413
12.5°	1638	1621	1606	1579	1540	1495	1443	1387	1260	721	403
15°	2129	2108	2087	2046	1986	1917	1837	1749	1546	742	357
16°	2349	2326	2296	2239	2162	2070	1968	1859	1621	732	339
17°	2477	2460	2426	2368	2289	2191	2080	1958	1693	727	321
18°	2558	2540	2499	2434	2346	2239	2117	1983	1697	696	298
19°	2616	2599	2556	2485	2390	2274	2141	1996	1693	663	274
20°	2643	2626	2580	2504	2404	2281	2143	1991	1673	629	252
21°	2641	2622	2574	2496	2390	2262	2116	1959	1632	595	232
22°	2612	2585	2533	2452	2345	2213	2065	1905	1577	558	212
23°	2544	2509	2457	2375	2266	2134	1987	1828	1506	526	196
24°	2438	2398	2347	2266	2157	2030	1884	1730	1418	490	179
25°	2307	2259	2211	2132	2025	1902	1763	1617	1322	459	163
27.5°	1867	1835	1772	1707	1619	1519	1405	1288	1068	376	129
30°	1394	1371	1322	1276	1214	1140	1060	976	821	296	93
32.5°	1008	991	957	925	883	836	782	726	620	218	62
35°	716	705	682	661	633	601	565	522	440	164	44
37.5°	500	490	462	448	430	408	385	361	317	104	28
40°	275	268	252	245	237	231	224	211	182	61	16
42.5°	159	157	155	142	135	128	122	118	103	32	8
45°	76	75	72	71	69	67	65	56	47	15	4
47.5°	43	41	37	31	30	28	26	25	20	5	2
50°	2	2	2	2	2	4	3	5	5	2	0
52.5°	0	0	0	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0	0	0	0
57.5°	0	0	0	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0	0	0	1
62.5°	0	0	0	0	0	0	0	0	0	1	1
65°	0	0	0	0	0	1	1	1	1	1	1
67.5°	0	0	0	0	0	0	0	1	1	1	1
70°	0	0	0	1	1	2	2	2	1	1	1
72.5°	0	0	0	1	2	3	3	4	4	1	1
75°	0	0	0	1	1	2	2	2	3	0	1
77.5°	0	0	0	0	0	0	0	0	0	0	1
80°	0	0	0	0	0	0	0	0	0	0	1
82.5°	0	0	0	0	0	0	0	0	0	0	1
85°	0	0	0	0	0	0	0	0	0	0	1
87.5°	0	0	0	0	0	0	0	0	0	0	1
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	513	513	513	513	513
2.5°	429	393	376	368	366
5°	364	312	284	272	267
7.5°	311	249	210	194	187
10°	274	193	152	133	128
12.5°	236	153	111	93	88
15°	188	113	79	65	61
16°	171	101	69	56	53
17°	156	89	60	48	45
18°	143	78	52	42	39
19°	128	69	45	36	34
20°	114	60	40	32	30
21°	101	53	34	27	26
22°	90	46	30	24	23
23°	80	40	26	21	19
24°	72	35	23	18	16
25°	64	31	20	16	13
27.5°	44	22	13	9	8
30°	32	16	9	5	5
32.5°	23	11	5	3	2
35°	16	6	3	1	0
37.5°	8	3	1	0	0
40°	5	2	1	0	0
42.5°	3	1	0	0	0
45°	1	0	0	0	0
47.5°	0	0	0	0	0
50°	0	0	0	0	0
52.5°	0	0	0	0	0
55°	0	0	0	0	0
57.5°	0	1	0	0	0
60°	1	1	0	0	0
62.5°	1	1	0	0	0
65°	1	1	0	0	0
67.5°	1	1	0	0	0
70°	1	1	0	0	0
72.5°	1	1	0	0	0
75°	1	1	0	0	0
77.5°	1	1	0	0	0
80°	1	1	0	0	0
82.5°	0	1	1	0	0
85°	1	1	0	0	0
87.5°	1	1	0	0	0
90°	0	0	0	0	0

(END OF REPORT)