

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P130241

Luminaire Tested: **HL612ICAT - HLM6940 - HL6WFL - 455SC**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130241  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33486)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL612ICAT - HLM6940 - HL6WFL - 455SC  
Description: HALO ALLSLOPE 6" 21W, Specular Clear Reflector, White Metal Trim  
Ring using 55 Degree Optic at a 6-12 Pitch  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1705.4 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Spacing Criteria (0/90/45): 1.47 / 0.84 / 1.17  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct

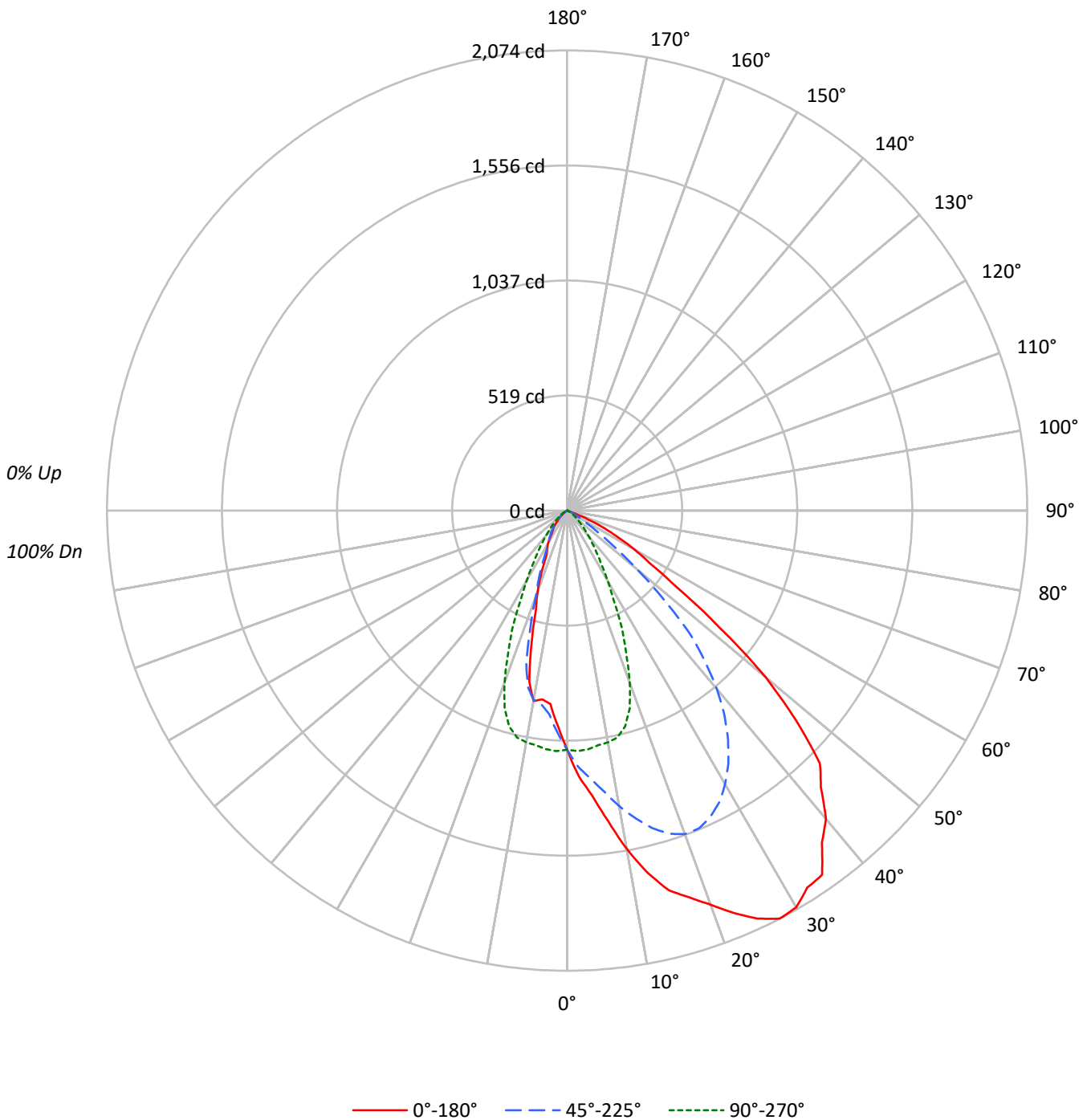
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	69	65	61	60
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	59	52	47	69	59	52	47	58	51	47	57	51	47	55	50	47	45
9	67	55	48	44	65	55	48	43	54	48	43	53	47	43	52	47	43	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38

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

	0°	90°	180°
0°	64299	64299	64299
5°	75398	63230	51208
10°	89691	61413	50436
15°	102254	58093	35715
20°	109480	47795	22467
25°	118888	34047	12734
30°	123405	21734	10452
35°	123103	14204	6967
40°	115636	9487	5409
45°	107470	6349	3581
50°	82320	4027	1954
55°	45467	2610	392
60°	28459	1553	0
65°	15349	621	0
70°	2098	171	0
75°	197	104	0
80°	0	233	0
85°	0	288	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.7	6.1
10°-20°	302.5	17.7
20°-30°	397.0	23.3
30°-40°	414.1	24.3
40°-50°	324.8	19.0
50°-60°	131.0	7.7
60°-70°	30.0	1.8
70°-80°	1.6	0.1
80°-90°	0.6	0.0
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°	803.3	47.1
0°-40°	1217.4	71.4
0°-60°	1673.2	98.1
0°-90°	1705.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1705.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1077	1077	1077	1077	1077	
5°	1288	1212	1080	921	874	131
15°	1772	1482	1007	711	619	500
25°	2029	1525	581	265	217	933
35°	2004	1264	231	130	113	1229
45°	1611	779	95	62	54	1193
55°	603	162	35	18	5	592
65°	171	25	7	1	0	170
75°	2	2	1	1	0	5
85°	0	1	2	1	0	0
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°	1077.2	1077.2	1077.2	1077.2	1077.2	1077.2	1077.2	1077.2	1077.2
2.5°	1198.4	1159.4	1156.8	1109.2	1085.0	1042.5	1001.8	981.0	970.7
5°	1287.6	1235.6	1212.2	1143.8	1079.8	993.2	921.3	887.5	874.5
7.5°	1411.4	1341.3	1277.2	1164.6	1066.8	950.7	882.3	859.8	858.1
10°	1549.1	1455.6	1352.5	1188.9	1060.7	924.8	867.6	867.6	871.1
12.5°	1671.2	1565.5	1420.1	1216.6	1046.9	888.4	814.8	802.7	788.8
15°	1772.5	1659.9	1481.5	1225.2	1007.0	820.0	710.9	643.4	619.1
17.5°	1827.0	1734.4	1527.4	1214.0	936.0	707.4	549.0	478.8	468.4
20°	1890.2	1775.9	1551.7	1172.4	825.2	555.0	410.4	394.0	387.9
22.5°	1963.0	1804.5	1550.8	1102.3	693.6	420.0	334.2	310.9	299.6
25°	2028.8	1824.4	1524.8	1015.7	581.0	323.0	265.0	222.5	217.3
27.5°	2073.8	1833.9	1483.3	913.5	452.9	261.5	202.6	185.3	193.1
30°	2065.1	1829.6	1424.4	810.5	363.7	211.3	165.4	170.6	174.9
32.5°	2014.9	1818.4	1351.6	707.4	286.6	174.0	148.9	145.5	139.4
35°	2003.7	1786.3	1264.2	603.5	231.2	145.5	129.9	116.9	113.4
37.5°	1885.9	1713.6	1165.5	503.9	187.9	123.8	110.8	102.2	101.3
40°	1814.9	1612.3	1048.6	409.6	148.9	106.5	94.4	86.6	84.9
42.5°	1692.8	1480.7	916.1	310.9	120.4	90.1	78.8	67.5	65.8
45°	1611.4	1329.1	779.3	215.6	95.2	72.7	61.5	55.4	53.7
47.5°	1398.4	1152.5	580.1	149.8	73.6	58.9	48.5	42.4	41.6
50°	1167.2	929.1	408.7	99.6	57.1	45.9	38.1	31.2	27.7
52.5°	868.5	671.1	265.8	65.8	45.0	35.5	27.7	19.0	16.5
55°	602.7	456.3	161.9	49.4	34.6	26.8	18.2	9.5	5.2
57.5°	441.6	319.5	99.6	37.2	26.0	19.0	10.4	1.7	0.0
60°	348.1	232.9	62.3	27.7	19.0	12.1	3.5	0.0	0.0
62.5°	251.1	157.6	39.8	19.0	12.1	6.9	0.9	0.0	0.0
65°	170.6	88.3	25.1	13.0	6.9	2.6	0.9	0.0	0.0
67.5°	89.2	41.6	13.0	6.9	3.5	1.7	0.9	0.0	0.0
70°	20.8	13.0	6.1	3.5	1.7	0.9	0.9	0.0	0.0
72.5°	5.2	4.3	2.6	1.7	0.9	0.9	0.9	0.0	0.0
75°	1.7	1.7	1.7	0.9	0.9	0.9	0.9	0.0	0.0
77.5°	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0
80°	0.0	0.0	0.9	0.9	1.7	0.9	0.9	0.0	0.0
82.5°	0.0	0.0	0.9	0.9	1.7	0.9	0.9	0.0	0.0
85°	0.0	0.0	0.9	0.9	1.7	0.9	0.9	0.0	0.0
87.5°	0.0	0.0	0.9	0.9	1.7	0.9	0.9	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)