

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: P130237

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130237  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33485)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL612ICAT - HLM6940 - HL6WFL - 455H  
Description: HALO ALLSLOPE 6" 21W, Semi-Specular Haze 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: 1697.8 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.45 / 0.76 / 1.17  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct

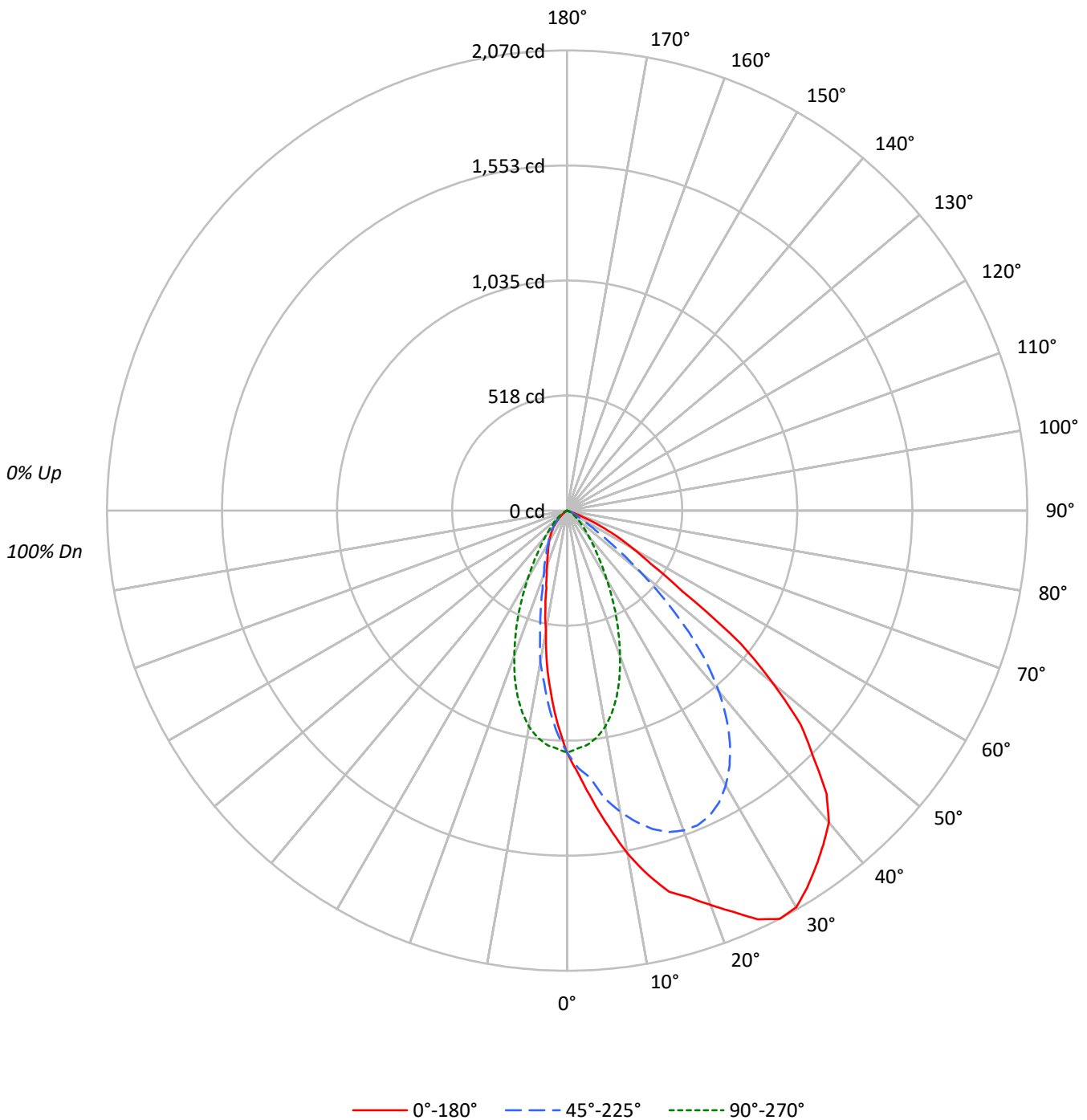
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	110	107	104	102	103	100	98		99	97	95		95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77		83	79	76		81	78	75	73
4	91	82	75	70	89	81	75	70	79	73	69		76	72	68		74	70	67	65
5	85	75	68	63	83	74	67	62	72	66	62		70	65	61		69	64	60	59
6	80	69	62	56	78	68	61	56	66	60	56		65	59	55		63	59	55	53
7	75	63	56	51	73	63	56	51	61	55	50		60	54	50		59	54	50	48
8	70	59	51	46	69	58	51	46	57	50	46		56	50	46		54	49	46	44
9	66	54	47	42	65	54	47	42	53	46	42		52	46	42		51	46	42	40
10	62	50	44	39	61	50	43	39	49	43	39		48	43	39		47	42	38	37

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

	0°	90°	180°
0°	64997	64997	64997
5°	76599	61924	48474
10°	90704	57134	31954
15°	102415	49774	20855
20°	109347	40260	15273
25°	118871	30449	11872
30°	123148	21136	9758
35°	119957	14217	7723
40°	116725	9736	5843
45°	104422	6636	4022
50°	85423	4436	2405
55°	47889	2965	1252
60°	27985	1782	572
65°	15475	864	234
70°	3521	353	0
75°	301	197	0
80°	0	233	0
85°	0	288	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.9	5.9
10°-20°	273.5	16.1
20°-30°	387.6	22.8
30°-40°	421.7	24.8
40°-50°	335.8	19.8
50°-60°	141.8	8.4
60°-70°	33.0	1.9
70°-80°	2.5	0.1
80°-90°	0.9	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°	762.0	44.9
0°-40°	1183.7	69.7
0°-60°	1661.3	97.9
0°-90°	1697.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1697.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1089	1089	1089	1089	1089	
5°	1308	1207	1058	900	828	133
15°	1775	1483	863	456	362	501
25°	2028	1515	520	225	203	932
35°	1952	1278	231	134	126	1223
45°	1566	775	100	70	60	1201
55°	635	163	39	24	17	630
65°	172	27	10	4	3	172
75°	3	2	2	1	0	8
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°	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9
2.5°	1186.7	1195.5	1159.7	1123.8	1071.5	1050.5	1004.2	985.9	962.3
5°	1308.1	1304.6	1206.8	1156.2	1057.5	987.6	900.3	860.1	827.8
7.5°	1435.6	1424.2	1308.1	1176.2	1028.7	909.9	786.8	726.5	696.8
10°	1566.6	1536.9	1375.3	1186.7	986.8	817.3	692.5	604.3	551.9
12.5°	1677.5	1642.5	1433.8	1186.7	930.0	721.3	560.6	479.4	453.2
15°	1775.3	1730.7	1482.7	1170.1	862.8	624.4	455.8	381.6	361.5
17.5°	1824.2	1802.4	1516.8	1143.9	784.2	525.7	368.5	320.5	306.5
20°	1887.9	1837.3	1530.8	1102.9	695.1	430.5	304.8	275.9	263.7
22.5°	1954.3	1865.2	1532.5	1049.6	606.0	351.9	268.1	240.1	231.4
25°	2028.5	1886.2	1515.1	983.3	519.6	288.2	225.3	209.6	202.6
27.5°	2070.4	1898.4	1480.1	905.5	433.1	244.5	195.6	190.4	181.6
30°	2060.8	1895.8	1427.7	813.0	353.7	206.1	170.3	166.8	163.3
32.5°	2010.2	1883.6	1359.6	716.9	285.5	176.4	151.1	147.6	144.1
35°	1952.5	1853.0	1277.5	613.0	231.4	151.1	133.6	129.2	125.7
37.5°	1893.2	1780.5	1177.1	513.5	187.7	129.2	116.1	110.9	107.4
40°	1832.0	1676.6	1062.7	419.2	152.8	112.6	100.4	95.2	91.7
42.5°	1726.4	1543.0	929.1	319.6	123.1	96.1	84.7	81.2	76.0
45°	1565.7	1364.9	775.4	228.8	99.5	80.3	69.9	62.9	60.3
47.5°	1424.2	1217.3	599.0	155.4	79.5	65.5	55.0	49.8	46.3
50°	1211.2	1001.6	428.8	105.7	62.9	51.5	42.8	37.5	34.1
52.5°	985.0	729.1	278.6	70.7	50.6	41.0	32.3	27.1	24.5
55°	634.8	489.0	163.3	53.3	39.3	31.4	23.6	17.5	16.6
57.5°	447.1	337.1	100.4	41.0	30.6	22.7	16.6	12.2	10.5
60°	342.3	240.1	65.5	31.4	21.8	15.7	10.5	7.9	7.0
62.5°	253.2	163.3	43.7	22.7	14.8	10.5	7.0	5.2	4.4
65°	172.0	91.7	27.1	14.8	9.6	6.1	4.4	2.6	2.6
67.5°	87.3	43.7	15.7	9.6	6.1	3.5	2.6	1.7	0.9
70°	34.9	15.7	7.9	5.2	3.5	2.6	1.7	0.9	0.0
72.5°	8.7	6.1	4.4	2.6	2.6	1.7	0.9	0.9	0.0
75°	2.6	2.6	1.7	1.7	1.7	1.7	0.9	0.9	0.0
77.5°	0.9	0.9	0.9	1.7	1.7	1.7	0.9	0.9	0.0
80°	0.0	0.9	0.9	1.7	1.7	1.7	0.9	0.0	0.0
82.5°	0.0	0.9	0.9	1.7	1.7	1.7	0.9	0.0	0.0
85°	0.0	0.9	0.9	1.7	1.7	1.7	0.9	0.0	0.0
87.5°	0.0	0.9	0.9	1.7	1.7	1.7	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)