

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: P130235

Luminaire Tested: **HL612ICAT - HLM6930 - HL6WFL - 455H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130235  
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 - HLM6930 - 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 / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1535.3 lumens  
Efficiency: N/A  
Efficacy: 80.4 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

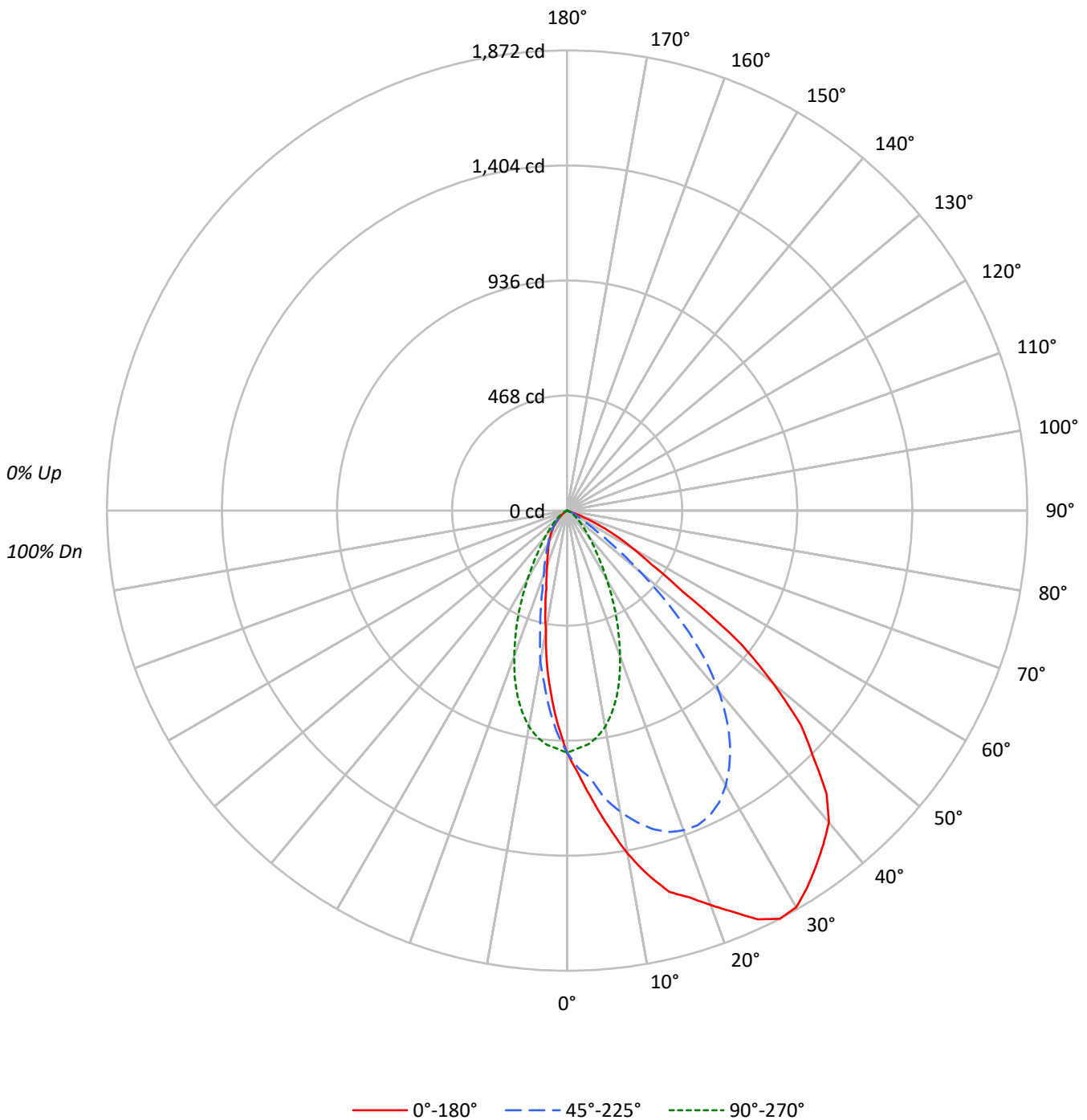
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	58777	58777	58777
5°	69268	55993	43836
10°	82019	51663	28891
15°	92608	45003	18859
20°	98881	36403	13814
25°	107491	27530	10736
30°	111358	19110	8826
35°	108475	12853	6985
40°	105550	8805	5282
45°	94425	6002	3635
50°	77242	4013	2172
55°	43310	2678	1132
60°	25303	1611	515
65°	14000	783	216
70°	3188	323	0
75°	278	185	0
80°	0	219	0
85°	0	271	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.3	5.9
10°-20°	247.3	16.1
20°-30°	350.5	22.8
30°-40°	381.4	24.8
40°-50°	303.6	19.8
50°-60°	128.2	8.4
60°-70°	29.9	1.9
70°-80°	2.3	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°	689.0	44.9
0°-40°	1070.4	69.7
0°-60°	1502.2	97.8
0°-90°	1535.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1535.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	985	985	985	985	985	
5°	1183	1091	956	814	749	120
15°	1605	1341	780	412	327	453
25°	1834	1370	470	204	183	842
35°	1766	1155	209	121	114	1105
45°	1416	701	90	63	54	1086
55°	574	148	36	21	15	569
65°	156	24	9	4	2	156
75°	2	2	2	1	0	7
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°	984.7	984.7	984.7	984.7	984.7	984.7	984.7	984.7	984.7
2.5°	1073.1	1081.0	1048.6	1016.2	968.9	949.9	908.1	891.5	870.2
5°	1182.9	1179.7	1091.3	1045.5	956.2	893.1	814.1	777.8	748.6
7.5°	1298.1	1287.9	1182.9	1063.6	930.2	822.8	711.4	657.0	630.1
10°	1416.6	1389.7	1243.7	1073.1	892.3	739.1	626.2	546.4	499.0
12.5°	1516.9	1485.3	1296.6	1073.1	840.9	652.2	506.9	433.5	409.8
15°	1605.3	1565.0	1340.8	1058.1	780.1	564.6	412.2	345.1	326.9
17.5°	1649.5	1629.8	1371.6	1034.4	709.1	475.4	333.2	289.8	277.2
20°	1707.2	1661.4	1384.2	997.3	628.5	389.3	275.6	249.5	238.5
22.5°	1767.2	1686.6	1385.8	949.1	548.0	318.2	242.4	217.1	209.2
25°	1834.3	1705.6	1370.0	889.1	469.8	260.6	203.7	189.5	183.2
27.5°	1872.2	1716.6	1338.4	818.8	391.7	221.1	176.9	172.1	164.2
30°	1863.5	1714.3	1291.0	735.1	319.8	186.4	154.0	150.8	147.7
32.5°	1817.7	1703.2	1229.4	648.3	258.2	159.5	136.6	133.4	130.3
35°	1765.6	1675.6	1155.2	554.3	209.2	136.6	120.8	116.9	113.7
37.5°	1711.9	1610.0	1064.4	464.3	169.8	116.9	105.0	100.3	97.1
40°	1656.6	1516.1	961.0	379.0	138.2	101.9	90.8	86.1	82.9
42.5°	1561.1	1395.3	840.2	289.0	111.3	86.9	76.6	73.4	68.7
45°	1415.8	1234.2	701.2	206.9	90.0	72.6	63.2	56.9	54.5
47.5°	1287.9	1100.7	541.7	140.6	71.9	59.2	49.7	45.0	41.8
50°	1095.2	905.7	387.7	95.5	56.9	46.6	38.7	34.0	30.8
52.5°	890.7	659.3	251.9	64.0	45.8	37.1	29.2	24.5	22.1
55°	574.1	442.2	147.7	48.2	35.5	28.4	21.3	15.8	15.0
57.5°	404.3	304.8	90.8	37.1	27.6	20.5	15.0	11.1	9.5
60°	309.5	217.1	59.2	28.4	19.7	14.2	9.5	7.1	6.3
62.5°	229.0	147.7	39.5	20.5	13.4	9.5	6.3	4.7	3.9
65°	155.6	82.9	24.5	13.4	8.7	5.5	3.9	2.4	2.4
67.5°	79.0	39.5	14.2	8.7	5.5	3.2	2.4	1.6	0.8
70°	31.6	14.2	7.1	4.7	3.2	2.4	1.6	0.8	0.0
72.5°	7.9	5.5	3.9	2.4	2.4	1.6	0.8	0.8	0.0
75°	2.4	2.4	1.6	1.6	1.6	1.6	0.8	0.8	0.0
77.5°	0.8	0.8	0.8	1.6	1.6	1.6	0.8	0.8	0.0
80°	0.0	0.8	0.8	1.6	1.6	1.6	0.8	0.0	0.0
82.5°	0.0	0.8	0.8	1.6	1.6	1.6	0.8	0.0	0.0
85°	0.0	0.8	0.8	1.6	1.6	1.6	0.8	0.0	0.0
87.5°	0.0	0.8	0.8	1.6	1.6	1.6	0.8	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)