

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: P130244

Luminaire Tested: **HL612ICAT - HLM6935 - HL6WFL - 455SN**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130244  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33487)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL612ICAT - HLM6935 - HL6WFL - 455SN  
Description: HALO ALLSLOPE 6" 21W, Satin Nickel Reflector, Satin Nickel Metal Trim Ring using 55 Degree Optic at a 6-12 Pitch  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1594.3 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Spacing Criteria (0/90/45): 1.5 / 0.76 / 1.18  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct

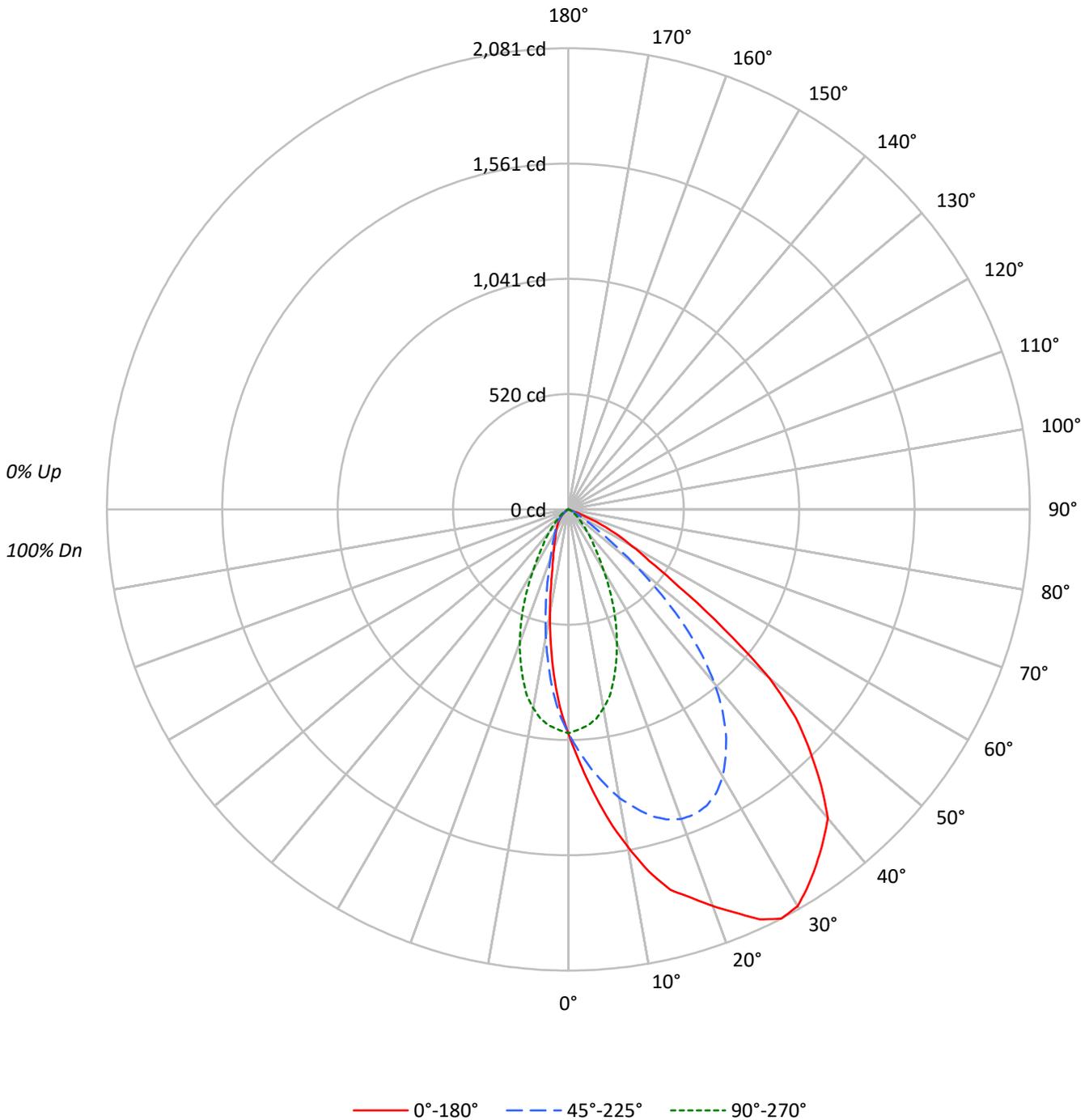
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	77	75	73
4	91	82	75	70	89	81	74	70	79	73	69	76	72	68	74	70	67	65
5	85	75	68	62	83	74	67	62	72	66	62	70	65	61	69	64	60	59
6	80	69	61	56	78	68	61	56	66	60	56	65	59	55	63	58	55	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	42	64	54	47	42	53	46	42	52	46	42	51	45	42	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

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

	0°	90°	180°
0°	60294	60294	60294
5°	74801	57369	43801
10°	89587	52705	27687
15°	102525	45655	15968
20°	110326	37046	11005
25°	119603	27970	8087
30°	123524	18925	6531
35°	119908	12478	5222
40°	115999	8404	4090
45°	102728	5669	3008
50°	83357	3794	2017
55°	45958	2550	1245
60°	27314	1635	850
65°	15070	855	621
70°	2623	434	353
75°	301	301	197
80°	123	233	123
85°	0	288	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.6	5.9
10°-20°	254.5	16.0
20°-30°	364.6	22.9
30°-40°	398.0	25.0
40°-50°	316.1	19.8
50°-60°	130.7	8.2
60°-70°	32.8	2.1
70°-80°	3.0	0.2
80°-90°	1.0	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°	712.7	44.7
0°-40°	1110.7	69.7
0°-60°	1557.6	97.7
0°-90°	1594.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1594.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1010	1010	1010	1010	1010	
5°	1277	1173	980	817	748	130
15°	1777	1431	791	374	277	502
25°	2041	1475	477	165	138	937
35°	1952	1239	203	96	85	1221
45°	1540	739	85	54	45	1178
55°	609	150	34	20	16	594
65°	168	26	10	7	7	168
75°	3	2	3	2	2	6
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°	1010.1	1010.1	1010.1	1010.1	1010.1	1010.1	1010.1	1010.1	1010.1
2.5°	1138.5	1101.2	1091.7	1070.8	995.4	963.2	922.5	892.1	890.3
5°	1277.4	1217.5	1173.2	1092.5	979.7	896.4	816.6	758.4	748.0
7.5°	1418.0	1348.5	1248.7	1117.7	953.7	818.3	697.7	620.5	607.5
10°	1547.3	1451.8	1321.6	1130.7	910.3	726.3	584.0	494.6	478.2
12.5°	1672.2	1561.1	1377.2	1131.6	861.7	632.6	472.9	386.2	362.7
15°	1777.2	1651.4	1431.0	1119.4	791.4	543.2	374.0	293.3	276.8
17.5°	1835.4	1724.3	1466.6	1096.0	717.7	452.1	293.3	236.0	227.4
20°	1904.8	1765.9	1486.5	1060.4	639.6	364.5	235.2	197.9	190.0
22.5°	1969.0	1795.4	1489.1	1012.7	560.6	289.8	197.0	166.6	161.4
25°	2041.0	1817.1	1475.2	948.5	477.3	233.4	164.9	141.4	138.0
27.5°	2081.0	1826.7	1444.0	871.3	394.8	194.4	140.6	123.2	122.4
30°	2067.1	1822.4	1391.9	787.9	316.7	162.3	121.5	110.2	109.3
32.5°	2013.3	1808.5	1320.8	691.6	253.4	137.1	107.6	98.1	96.3
35°	1951.7	1772.0	1239.2	584.0	203.1	115.4	95.5	85.9	85.0
37.5°	1887.4	1700.0	1140.3	495.5	167.5	98.9	84.2	75.5	74.6
40°	1820.6	1592.4	1024.9	400.9	131.9	86.8	73.8	66.0	64.2
42.5°	1687.0	1468.3	893.0	303.7	106.7	75.5	63.3	56.4	54.7
45°	1540.3	1315.6	739.4	222.2	85.0	63.3	53.8	46.9	45.1
47.5°	1391.1	1139.4	569.3	149.3	67.7	52.1	43.4	38.2	37.3
50°	1181.9	910.3	402.7	98.1	53.8	42.5	33.8	30.4	28.6
52.5°	881.7	662.1	256.0	64.2	43.4	33.0	26.9	23.4	21.7
55°	609.2	450.4	150.1	49.5	33.8	26.0	20.0	16.5	16.5
57.5°	432.2	315.9	95.5	38.2	26.9	19.1	14.8	12.1	12.1
60°	334.1	226.5	61.6	28.6	20.0	14.8	11.3	9.5	10.4
62.5°	251.7	155.3	40.8	21.7	13.9	10.4	8.7	7.8	8.7
65°	167.5	91.1	26.0	13.9	9.5	6.9	6.9	6.1	6.9
67.5°	86.8	40.8	14.8	8.7	6.1	5.2	5.2	5.2	5.2
70°	26.0	14.8	7.8	5.2	4.3	4.3	3.5	3.5	3.5
72.5°	6.9	5.2	4.3	3.5	2.6	3.5	2.6	2.6	2.6
75°	2.6	2.6	1.7	1.7	2.6	2.6	1.7	1.7	1.7
77.5°	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7	0.9
80°	0.9	0.9	0.9	1.7	1.7	1.7	0.9	0.9	0.9
82.5°	0.0	0.9	0.9	1.7	1.7	1.7	0.9	0.9	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	0.0	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)