

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: P130248

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33488)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL612ICAT - HLM6935 - HL6WFL - 455TBZ
Description: HALO ALLSLOPE 6" 21W, Tuscan Bronze Reflector, Tuscan Bronze 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: 1569.5 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.38 / 0.75 / 1.12
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

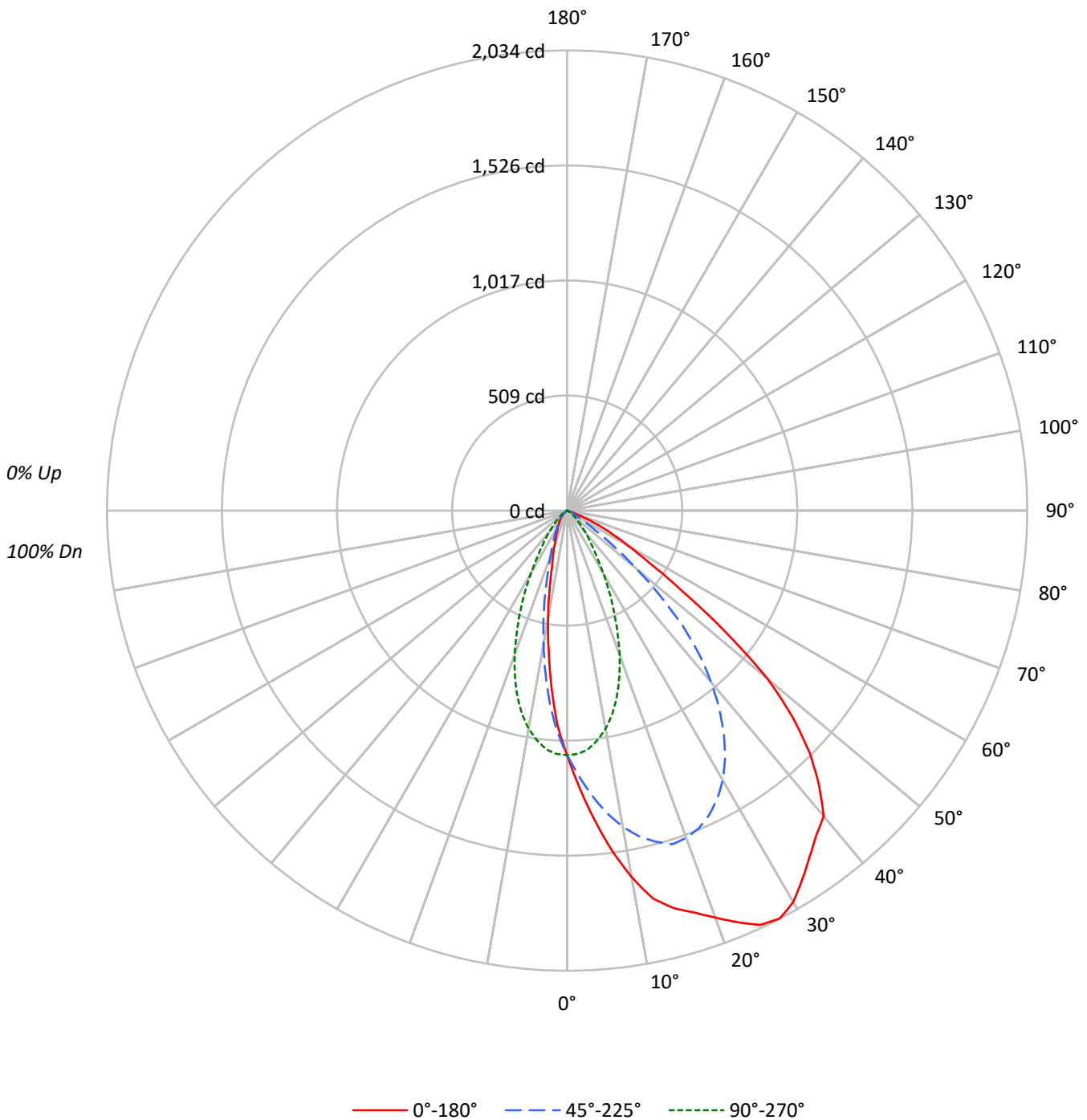
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82				82
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	68	75	71	68	66				66
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	56	54				54
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49				49
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45				45
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41				41
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38				38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	64526	64526	64526
5°	80218	62030	46178
10°	95290	56712	28081
15°	104907	49001	14866
20°	110853	39299	9296
25°	118408	28626	6153
30°	119401	19027	4721
35°	114760	11937	3625
40°	112380	7792	2708
45°	101141	4975	1854
50°	81382	3117	1037
55°	46863	2029	324
60°	25745	1136	74
65°	13424	549	0
70°	3410	171	0
75°	301	197	0
80°	0	233	0
85°	0	288	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	6.4
10°-20°	265.1	16.9
20°-30°	362.2	23.1
30°-40°	383.0	24.4
40°-50°	302.1	19.2
50°-60°	125.9	8.0
60°-70°	28.1	1.8
70°-80°	2.3	0.1
80°-90°	0.7	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°	727.4	46.3
0°-40°	1110.4	70.7
0°-60°	1538.3	98.0
0°-90°	1569.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1569.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1081	1081	1081	1081	1081	
5°	1370	1266	1059	861	789	139
15°	1818	1516	849	370	258	515
25°	2021	1484	488	139	105	925
35°	1868	1207	194	72	59	1174
45°	1516	724	75	37	28	1151
55°	621	152	27	10	4	592
65°	149	24	6	1	0	155
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°	1081.0	1081.0	1081.0	1081.0	1081.0	1081.0	1081.0	1081.0	1081.0
2.5°	1221.6	1196.4	1173.0	1124.4	1076.7	1039.4	979.5	944.8	953.5
5°	1369.9	1329.1	1265.8	1163.4	1059.3	963.0	860.6	800.8	788.6
7.5°	1515.7	1458.4	1349.1	1210.3	1023.8	872.8	729.6	644.6	624.7
10°	1645.8	1573.8	1419.4	1197.3	979.5	773.0	600.4	504.9	485.0
12.5°	1756.9	1671.0	1475.8	1195.5	921.4	681.9	478.9	381.7	361.8
15°	1818.5	1748.2	1515.7	1177.3	849.4	563.9	369.6	281.1	257.7
17.5°	1862.7	1796.8	1546.0	1144.3	766.9	465.0	278.5	213.4	203.9
20°	1913.9	1814.1	1539.1	1097.5	678.5	368.7	213.4	171.8	160.5
22.5°	1969.4	1826.3	1520.0	1042.8	579.5	285.4	173.5	137.1	129.3
25°	2020.6	1828.9	1484.4	971.7	488.5	222.1	138.8	110.2	105.0
27.5°	2033.6	1820.2	1436.7	883.2	400.8	177.9	113.7	92.8	90.2
30°	1998.1	1799.4	1376.0	791.2	318.4	144.9	92.8	80.7	79.0
32.5°	1933.9	1775.1	1298.8	692.3	247.3	118.9	81.6	71.1	68.5
35°	1867.9	1730.0	1206.8	592.6	194.3	98.9	72.0	61.6	59.0
37.5°	1808.9	1651.0	1104.4	493.7	157.0	82.4	62.5	52.9	50.3
40°	1763.8	1553.0	989.9	397.4	122.3	72.0	53.8	45.1	42.5
42.5°	1648.4	1421.1	866.7	296.7	95.4	61.6	45.1	38.2	35.6
45°	1516.5	1278.8	724.4	202.1	74.6	50.3	37.3	30.4	27.8
47.5°	1351.7	1109.6	555.3	137.1	58.1	39.9	28.6	22.6	21.7
50°	1153.9	910.1	402.6	89.4	44.2	31.2	20.8	16.5	14.7
52.5°	887.5	691.5	262.0	59.0	34.7	23.4	15.6	10.4	8.7
55°	621.2	462.4	151.8	43.4	26.9	17.4	10.4	6.1	4.3
57.5°	431.2	304.5	92.0	33.0	20.0	12.1	6.1	2.6	1.7
60°	314.9	217.8	57.3	24.3	13.9	7.8	2.6	0.9	0.9
62.5°	226.4	146.6	37.3	18.2	9.5	4.3	1.7	0.9	0.9
65°	149.2	85.0	24.3	12.1	6.1	2.6	0.9	0.9	0.0
67.5°	82.4	42.5	14.7	6.9	3.5	1.7	0.9	0.9	0.0
70°	33.8	19.1	7.8	3.5	1.7	1.7	0.9	0.0	0.0
72.5°	9.5	6.9	3.5	1.7	1.7	1.7	0.9	0.0	0.0
75°	2.6	2.6	1.7	1.7	1.7	1.7	0.9	0.0	0.0
77.5°	0.9	0.9	0.9	1.7	1.7	1.7	0.9	0.0	0.0
80°	0.0	0.9	0.9	0.9	1.7	0.9	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	0.0	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)