

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: P130265

Luminaire Tested: **HL612ICAT - HLM6940 - HL6WFL - 71PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130265
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33492)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL612ICAT - HLM6940 - HL6WFL - 71PS
Description: HALO ALLSLOPE 6" 21W, Drop Opal Glass Lens, White Polymer Trim Ring
"Dead Front", Wet Location - Showerlight 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: 945.9 lumens
Efficiency: N/A
Efficacy: 49.5 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.29 / 1.46
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

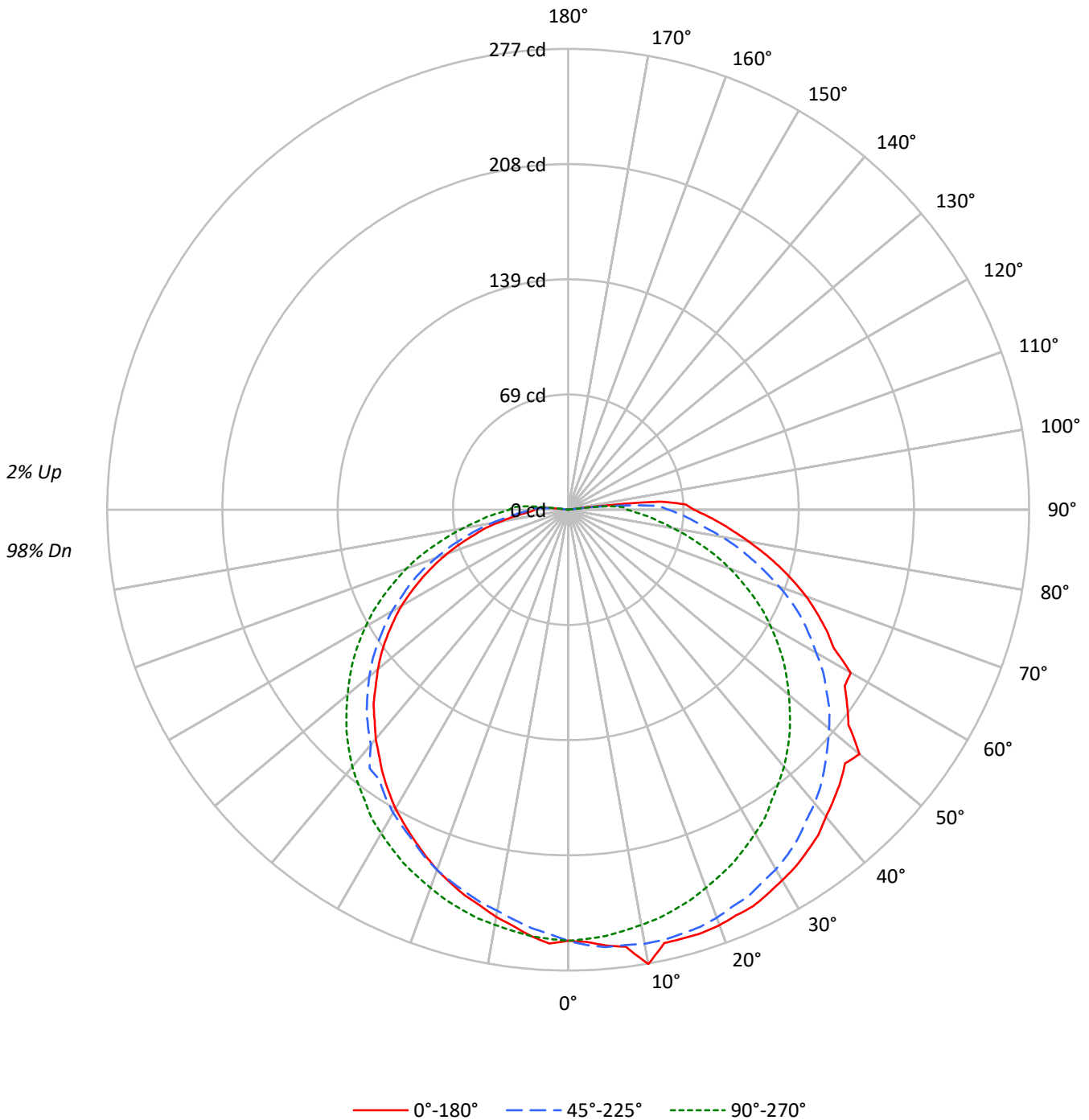
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	98
1	106	100	95	90	103	97	92	88	92	89	85	88	85	82	84	81	79	77
2	95	86	78	71	92	83	76	70	79	73	68	76	71	66	72	68	64	62
3	86	74	65	58	83	72	64	57	69	62	56	66	60	55	63	58	53	51
4	78	65	56	48	76	64	55	48	61	53	47	58	51	46	56	50	45	43
5	72	58	48	41	69	57	48	41	54	46	40	52	45	39	50	44	39	36
6	66	52	42	36	64	51	42	35	49	41	35	47	40	34	45	39	34	31
7	61	47	38	31	59	46	37	31	44	36	31	42	35	30	41	35	30	28
8	57	43	34	28	55	42	33	27	40	33	27	39	32	27	37	31	26	24
9	53	39	31	25	52	38	30	25	37	30	24	36	29	24	35	28	24	22
10	50	36	28	22	48	35	27	22	34	27	22	33	26	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	15466	15466	15466
5°	15401	15061	15061
10°	16055	14672	14394
15°	15391	14341	13845
20°	15395	14011	13345
25°	15412	13730	12833
30°	15370	13427	12400
35°	15390	13099	11925
40°	15355	12858	11456
45°	15433	12565	11031
50°	16116	12208	10523
55°	15435	11904	10026
60°	16024	11495	9459
65°	15403	11012	8691
70°	15333	10421	7818
75°	15169	9634	6751
80°	15083	8789	5635
85°	15573	8278	4546



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.6	2.6
10°-20°	71.1	7.5
20°-30°	110.0	11.6
30°-40°	137.5	14.5
40°-50°	150.3	15.9
50°-60°	147.3	15.6
60°-70°	128.0	13.5
70°-80°	95.1	10.1
80°-90°	59.5	6.3
90°-100°	22.4	2.4
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°	205.7	21.7
0°-40°	343.2	36.3
0°-60°	640.9	67.8
0°-90°	923.5	97.6
90°-120°	22.4	2.4
90°-150°	22.4	2.4
90°-180°	22.0	2.3
0°-180°	945.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	259	259	259	259	259	
5°	263	264	257	252	257	25
15°	267	264	249	238	240	76
25°	263	256	234	220	219	121
35°	250	241	213	198	194	157
45°	231	218	188	171	165	180
55°	205	189	158	140	133	185
65°	171	155	122	104	97	170
75°	131	114	83	65	58	138
85°	92	76	49	32	27	79
90°	76	60	35	23	20	42
95°	56	27	24	9	13	25
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	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°	259.1	259.1	259.1	259.1	259.1	259.1	259.1	259.1	259.1
2.5°	260.1	262.0	262.0	261.0	258.2	259.1	255.3	256.3	261.0
5°	263.0	263.9	263.9	261.0	257.2	257.2	252.4	252.4	257.2
7.5°	264.9	265.8	263.9	261.0	255.3	254.4	248.6	248.6	252.4
10°	277.3	266.8	264.9	260.1	253.4	251.5	244.8	245.7	248.6
12.5°	266.8	266.8	264.9	259.1	251.5	248.6	241.9	241.0	243.8
15°	266.8	266.8	263.9	257.2	248.6	245.7	238.1	237.1	240.0
17.5°	266.8	266.8	263.0	255.3	245.7	241.9	234.3	233.3	235.2
20°	265.8	265.8	261.0	252.4	241.9	238.1	230.4	228.5	230.4
22.5°	263.9	263.9	258.2	249.6	238.1	233.3	225.7	223.8	224.7
25°	263.0	262.0	256.3	245.7	234.3	229.5	219.9	219.0	219.0
27.5°	260.1	259.1	252.4	242.9	229.5	223.8	215.1	213.2	213.2
30°	257.2	256.3	249.6	238.1	224.7	219.0	210.4	207.5	207.5
32.5°	254.4	253.4	245.7	234.3	219.9	213.2	204.6	201.8	200.8
35°	250.5	249.6	241.0	228.5	213.2	206.5	197.9	196.0	194.1
37.5°	246.7	244.8	235.2	222.8	207.5	200.8	196.0	189.3	186.5
40°	241.0	240.0	230.4	217.1	201.8	197.0	184.5	183.6	179.8
42.5°	236.2	234.3	224.7	211.3	195.1	186.5	177.9	175.0	172.1
45°	231.4	228.5	218.0	204.6	188.4	179.8	171.2	167.3	165.4
47.5°	225.7	226.6	211.3	197.9	180.7	172.1	163.5	159.7	156.8
50°	228.5	217.1	204.6	190.3	173.1	164.5	155.9	152.0	149.2
52.5°	212.3	209.4	197.9	182.6	165.4	156.8	148.2	144.4	141.5
55°	204.6	201.8	189.3	175.0	157.8	148.2	139.6	135.8	132.9
57.5°	197.0	194.1	181.7	167.3	149.2	139.6	131.0	127.2	124.3
60°	196.0	185.5	172.1	158.7	140.6	131.0	122.4	121.4	115.7
62.5°	179.8	176.9	163.5	149.2	132.0	121.4	112.8	109.0	106.1
65°	171.2	168.3	154.9	139.6	122.4	111.9	104.2	99.4	96.6
67.5°	161.6	158.7	145.3	130.0	112.8	102.3	94.7	90.8	87.0
70°	152.0	149.2	134.8	120.5	103.3	92.8	84.1	80.3	77.5
72.5°	141.5	138.7	124.3	110.0	93.7	82.2	74.6	70.8	67.9
75°	131.0	128.1	113.8	100.4	83.2	72.7	65.0	61.2	58.3
77.5°	120.5	117.6	104.2	89.9	73.6	63.1	55.5	51.6	50.7
80°	110.0	107.1	93.7	79.4	64.1	53.5	46.9	43.0	41.1
82.5°	100.4	97.5	83.2	70.8	55.5	44.9	38.2	35.4	33.5
85°	91.8	88.0	75.5	62.2	48.8	37.3	31.6	27.7	26.8
87.5°	83.2	79.4	67.9	54.5	41.1	31.6	25.8	22.9	22.0
90°	75.5	71.7	60.2	47.8	35.4	27.7	22.9	21.0	20.1
92.5°	70.8	66.0	53.5	41.1	33.5	25.8	19.1	18.2	19.1
95°	55.5	41.1	26.8	25.8	23.9	14.3	8.6	10.5	13.4
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)