

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P199513

Luminaire Tested: **S124-DIP-ULO-LO-30-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199513
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28062)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIP-ULO-LO-30-X-X0048-1D-UDD-1-5-W
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LLO-3000K, SATIN WHITE DIFFUSER
DOWNLIGHT LLO-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2915.7 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

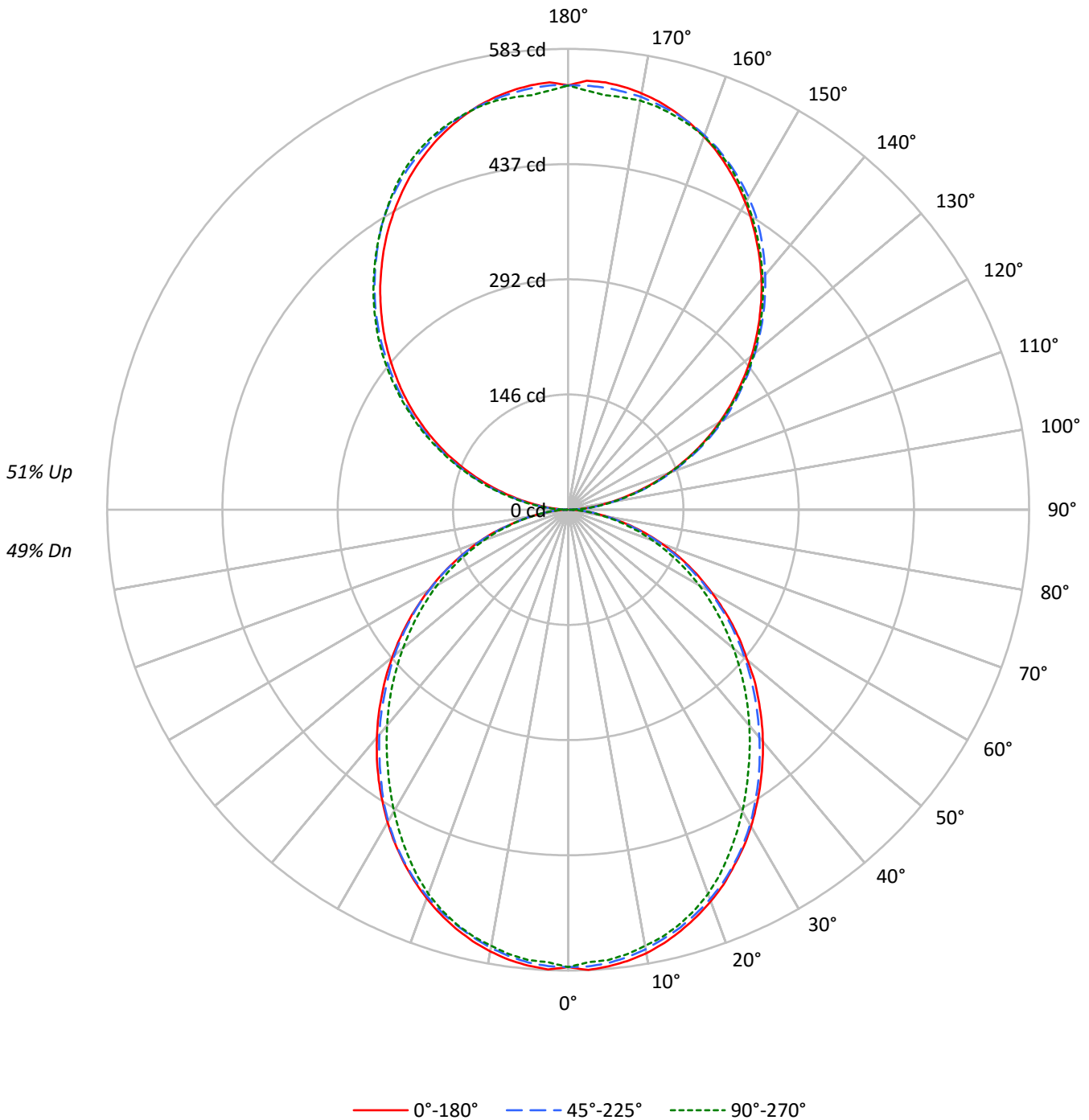
Input Watts (W): 26.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49					49			
1	98	93	90	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42					42			
2	89	82	76	70	82	75	70	66	64	60	57	53	50	48	43	41	40	35					35			
3	81	72	65	59	75	66	60	55	56	52	48	47	44	41	38	36	34	30					30			
4	74	64	56	50	68	59	52	47	50	45	41	42	38	35	34	32	29	26					26			
5	68	57	49	43	63	53	45	40	45	39	35	38	34	30	31	28	26	22					22			
6	63	51	43	37	58	47	40	35	40	35	31	34	30	27	28	25	23	20					20			
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	17					17			
8	54	42	34	29	50	39	32	27	34	28	24	28	24	21	24	20	18	16					16			
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14					14			
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13					13			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4576	4576	4576
5°	4568	4134	4560
10°	4504	3755	4484
15°	4406	3418	4384
20°	4293	3088	4262
25°	4157	2753	4118
30°	4013	2439	3962
35°	3843	2148	3789
40°	3672	1891	3608
45°	3487	1655	3418
50°	3278	1432	3220
55°	3091	1225	3011
60°	2860	1027	2778
65°	2631	832	2526
70°	2337	640	2229
75°	1966	450	1823
80°	1476	274	1383
85°	868	121	819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.5	1.9
10°-20°	153.6	5.3
20°-30°	225.0	7.7
30°-40°	257.9	8.8
40°-50°	254.2	8.7
50°-60°	219.1	7.5
60°-70°	159.8	5.5
70°-80°	87.1	3.0
80°-90°	22.8	0.8
90°-100°	27.6	0.9
100°-110°	100.1	3.4
110°-120°	177.1	6.1
120°-130°	235.5	8.1
130°-140°	264.8	9.1
140°-150°	260.4	8.9
150°-160°	219.7	7.5
160°-170°	145.8	5.0
170°-180°	50.8	1.7
0°-30°	433.1	14.9
0°-40°	690.9	23.7
0°-60°	1164.3	39.9
0°-90°	1434.0	49.2
90°-120°	304.8	10.5
90°-150°	1065.4	36.5
90°-180°	1482.0	50.8
0°-180°	2915.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	579	579	579	579	579	
5°	580	576	572	575	579	55
15°	551	547	543	544	549	155
25°	497	495	481	491	492	229
35°	424	419	398	413	418	265
45°	340	333	314	328	334	263
55°	254	249	232	244	247	226
65°	168	164	152	160	162	166
75°	86	83	77	80	80	92
85°	20	20	18	19	18	22
90°	1	1	1	1	1	3
95°	23	26	25	23	18	25
105°	93	97	96	94	86	98
115°	179	183	180	178	171	177
125°	262	268	265	261	254	234
135°	342	349	346	342	332	264
145°	415	424	418	418	406	260
155°	478	483	481	478	469	220
165°	521	520	517	516	515	147
175°	543	536	526	535	539	52
180°	537	537	537	537	537	



TEST NUMBER: P199513

CATALOG NUMBER: S124-DIP-ULO-LO-30-X-X0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	578.6	578.6	578.6	578.6	578.6	578.6	578.6	578.6	578.6
2.5°	582.8	576.2	578.3	576.9	573.0	576.9	577.9	575.8	582.1
5°	580.0	573.7	575.8	573.7	572.0	573.4	575.1	572.7	579.0
7.5°	575.8	569.2	570.9	569.2	567.4	568.8	569.9	567.8	574.4
10°	569.9	562.9	564.6	562.5	560.4	561.8	562.9	560.8	567.4
12.5°	561.5	554.9	556.2	554.9	553.1	553.5	554.2	552.1	559.0
15°	551.4	544.7	547.2	545.8	543.3	544.7	544.4	541.9	548.6
17.5°	539.8	533.5	536.3	534.9	531.4	533.5	533.5	529.7	536.7
20°	527.2	520.6	524.4	520.9	517.1	519.2	520.9	516.4	523.4
22.5°	513.2	506.2	510.8	504.5	500.3	502.7	506.9	502.0	508.3
25°	496.8	491.2	495.4	486.6	481.0	484.5	491.2	486.3	492.2
27.5°	480.7	475.1	478.6	468.8	461.1	465.6	474.0	469.8	475.1
30°	462.8	458.3	460.0	448.5	440.5	445.3	455.1	452.7	456.9
32.5°	443.3	439.8	439.8	427.5	419.1	424.7	435.2	434.5	437.3
35°	423.7	421.6	419.1	405.8	397.8	403.0	413.2	416.0	417.7
37.5°	403.7	402.3	397.8	384.8	377.1	382.7	392.2	396.4	397.4
40°	383.1	382.4	376.1	363.8	356.1	361.7	371.5	376.8	376.4
42.5°	362.1	362.8	355.1	343.2	335.5	341.1	350.2	357.2	355.4
45°	340.4	342.5	333.4	322.6	314.5	320.5	327.8	336.5	333.7
47.5°	319.4	321.9	312.4	301.2	293.5	299.8	307.2	316.6	312.4
50°	295.6	300.5	291.4	280.2	272.5	278.5	287.2	295.3	290.4
52.5°	275.0	278.5	270.4	259.6	252.2	257.1	265.9	273.9	268.7
55°	253.6	257.5	249.4	238.6	231.6	236.5	244.2	252.2	247.0
57.5°	231.2	235.1	227.7	218.0	211.3	216.6	224.6	230.2	225.3
60°	209.6	214.5	206.4	197.0	191.4	195.6	201.9	208.5	203.6
62.5°	188.6	193.1	185.4	176.7	171.4	175.3	181.9	187.2	182.6
65°	168.3	171.1	164.4	156.4	151.8	154.3	160.2	166.2	161.6
67.5°	147.6	150.4	143.8	136.8	132.2	134.7	139.6	145.2	141.0
70°	126.6	129.1	123.5	117.2	113.3	115.8	120.3	124.5	120.7
72.5°	106.7	108.5	103.2	98.3	95.5	97.3	100.4	104.3	102.5
75°	86.4	88.5	83.3	79.1	76.6	77.3	79.8	82.9	80.1
77.5°	67.2	69.3	65.1	61.9	60.5	60.9	62.6	65.1	61.6
80°	49.3	51.1	48.6	45.8	44.4	45.1	46.2	47.6	46.2
82.5°	33.2	35.0	33.2	31.5	30.4	31.1	31.5	32.2	31.1
85°	19.6	21.0	19.9	18.9	18.5	18.5	18.9	19.6	18.5
87.5°	8.7	9.8	9.1	8.4	7.3	7.7	8.0	8.7	8.0
90°	0.7	1.7	1.4	1.0	1.0	1.0	1.4	1.7	0.7
92.5°	10.5	11.9	12.2	11.2	11.2	10.8	10.1	9.8	6.3
95°	23.1	25.2	25.5	25.5	24.8	24.1	23.4	21.7	17.8
97.5°	37.4	39.9	40.6	39.9	40.2	39.5	37.8	36.0	32.2
100°	53.9	57.0	57.7	57.0	57.4	55.6	54.9	53.2	48.6
102.5°	72.1	75.9	76.3	75.6	75.6	74.2	73.5	71.4	66.8
105°	92.7	96.9	97.3	95.9	95.9	94.5	93.8	91.7	86.4
107.5°	113.7	117.9	117.9	116.5	116.5	115.4	114.0	112.6	107.4
110°	135.4	138.9	139.6	137.8	137.5	136.4	135.0	132.9	128.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	157.1	160.6	161.3	159.2	158.8	156.7	156.4	153.9	149.4
115°	178.8	182.3	183.3	180.9	180.2	177.7	177.7	175.3	171.1
117.5°	199.8	204.0	205.0	202.2	201.9	199.8	198.4	196.3	191.7
120°	220.8	226.0	226.7	223.5	223.2	220.8	220.1	217.3	212.7
122.5°	241.7	247.0	248.0	245.2	244.2	241.0	240.7	238.2	233.3
125°	261.7	267.6	267.6	266.2	265.2	262.7	261.3	258.5	253.6
127.5°	282.3	288.6	288.3	287.2	286.2	282.7	281.6	278.8	273.6
130°	302.6	308.2	308.2	307.5	306.8	303.7	301.9	299.1	293.2
132.5°	322.6	328.2	328.9	327.1	326.4	322.2	322.6	319.1	313.1
135°	342.1	347.0	348.8	346.0	345.6	341.1	342.5	337.9	332.0
137.5°	361.4	365.2	368.4	364.9	364.5	360.0	362.1	356.1	350.9
140°	380.3	383.4	387.6	383.4	382.7	378.5	380.6	374.3	369.8
142.5°	398.1	400.9	406.2	401.6	400.6	396.7	399.2	391.8	387.6
145°	415.3	417.4	424.4	419.5	418.1	414.6	417.7	408.6	405.5
147.5°	432.4	433.5	441.5	437.0	434.9	432.1	435.2	425.1	422.6
150°	448.5	448.5	456.5	453.0	451.3	448.1	450.2	440.5	438.7
152.5°	463.5	462.8	470.2	468.1	467.0	463.5	464.2	455.1	454.1
155°	477.5	476.1	482.8	481.7	481.0	477.5	477.5	468.4	468.8
157.5°	490.8	488.0	494.3	494.0	492.6	489.8	489.1	481.0	482.1
160°	502.4	499.9	504.1	503.4	502.4	499.6	499.6	492.6	494.3
162.5°	512.5	509.4	512.9	510.8	510.4	507.3	508.7	502.7	505.2
165°	521.3	518.1	519.9	517.1	516.7	513.9	516.4	512.2	515.0
167.5°	529.0	525.5	525.1	522.7	522.0	519.9	522.7	520.2	523.4
170°	534.9	531.4	530.4	526.2	525.5	523.7	527.9	527.2	530.0
172.5°	539.5	536.0	533.5	528.6	526.2	526.5	532.1	532.1	535.3
175°	542.6	538.8	536.0	531.1	526.5	529.3	535.3	535.6	539.1
177.5°	543.3	539.5	537.0	532.5	530.7	531.1	537.4	537.4	541.2
180°	536.7	536.7	536.7	536.7	536.7	536.7	536.7	536.7	536.7

(END OF REPORT)