

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243548

Luminaire Tested: S124DRP-H575D935-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243548  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-H575D935-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

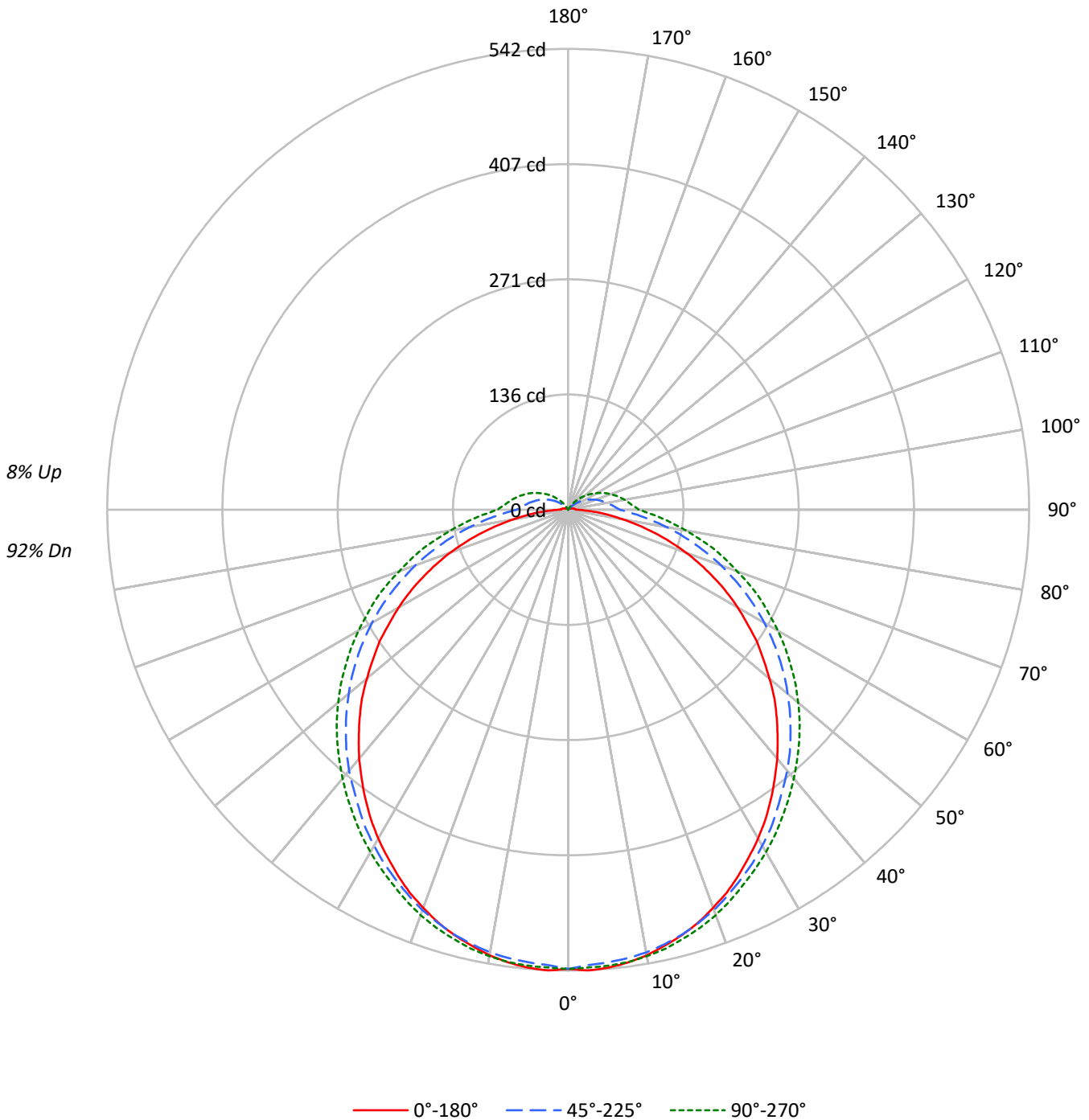
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1846.4 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: 24 FT

TEST NUMBER: P243548

CATALOG NUMBER: S124DRP-H575D935-X4F0-XX-UDD-D-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243548

CATALOG NUMBER: S124DRP-H575D935-X4F0-XX-UDD-D-W

**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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

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

	0°	45°	90°
0°	4801	4801	4801
5°	4816	4685	4695
10°	4785	4607	4597
15°	4738	4513	4487
20°	4676	4413	4375
25°	4604	4298	4246
30°	4528	4191	4136
35°	4443	4072	4021
40°	4357	3971	3913
45°	4267	3861	3811
50°	4164	3749	3704
55°	4073	3631	3582
60°	3945	3499	3462
65°	3798	3352	3341
70°	3620	3184	3168
75°	3338	2979	3043
80°	2961	2781	2865
85°	2677	2619	2761

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4267 cd/sqm



TEST NUMBER: P243548

CATALOG NUMBER: S124DRP-H575D935-X4F0-XX-UDD-D-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.1	2.8
10°-20°	146.6	7.9
20°-30°	221.9	12.0
30°-40°	268.8	14.6
40°-50°	284.3	15.4
50°-60°	267.8	14.5
60°-70°	222.5	12.1
70°-80°	156.4	8.5
80°-90°	88.1	4.8
90°-100°	52.3	2.8
100°-110°	38.7	2.1
110°-120°	25.8	1.4
120°-130°	14.6	0.8
130°-140°	6.2	0.3
140°-150°	1.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	419.7	22.7
0°-40°	688.5	37.3
0°-60°	1240.5	67.2
0°-90°	1707.6	92.5
90°-120°	116.8	6.3
90°-150°	138.8	7.5
90°-180°	139.0	7.5
0°-180°	1846.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	540	540	540	540	540	
5°	541	538	534	539	538	51
15°	518	519	517	523	522	146
25°	474	478	480	487	487	218
35°	416	422	429	438	440	260
45°	347	358	370	381	384	268
55°	271	285	302	316	319	241
65°	189	208	229	243	250	187
75°	105	127	153	170	177	111
85°	33	58	86	104	110	34
90°	10	34	61	78	83	7
95°	8	28	53	70	74	6
105°	6	18	40	55	60	6
115°	4	9	28	41	46	4
125°	2	2	17	28	32	2
135°	1	1	5	15	18	1
145°	1	0	0	3	6	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



TEST NUMBER: P243548

CATALOG NUMBER: S124DRP-H575D935-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	540.1	540.1	540.1	540.1	540.1
2.5°	542.4	540.7	536.1	539.6	539.0
5°	540.7	538.4	534.4	539.0	538.4
7.5°	537.3	535.6	532.1	537.3	536.7
10°	532.1	531.0	528.7	533.3	533.3
12.5°	525.2	525.2	523.5	528.7	528.7
15°	517.8	518.9	517.2	522.9	522.4
17.5°	509.1	510.3	509.7	515.5	515.5
20°	498.2	500.0	501.1	507.4	507.4
22.5°	487.3	489.6	490.8	497.7	497.7
25°	474.1	478.2	479.9	486.8	486.8
27.5°	460.4	465.5	469.0	475.3	476.4
30°	446.6	452.3	456.3	463.2	465.0
32.5°	431.7	437.4	443.7	450.6	452.9
35°	415.6	422.5	428.8	438.0	439.7
37.5°	398.9	407.0	414.4	424.2	426.5
40°	382.3	392.1	400.7	409.8	412.7
42.5°	364.5	374.3	385.7	395.5	398.4
45°	346.7	357.6	369.7	380.6	384.0
47.5°	328.9	340.4	353.6	365.1	369.1
50°	308.8	321.4	336.9	348.4	353.0
52.5°	289.3	303.1	320.3	331.8	336.9
55°	270.9	285.3	302.5	315.7	319.2
57.5°	249.7	265.8	284.7	299.1	302.5
60°	230.2	246.3	266.3	280.7	284.7
62.5°	210.1	227.3	248.0	262.3	266.3
65°	188.9	207.8	229.0	243.4	249.7
67.5°	168.2	187.1	209.5	225.6	230.8
70°	147.5	167.0	191.1	207.2	211.2
72.5°	125.7	146.9	171.6	188.3	194.0
75°	105.0	127.4	152.7	169.9	176.8
77.5°	85.0	108.5	134.9	152.7	157.3
80°	64.9	90.7	117.1	134.9	140.6
82.5°	48.8	72.9	100.5	119.4	124.0
85°	32.7	58.0	85.5	103.9	109.6
87.5°	19.5	45.3	71.8	89.0	94.7
90°	9.8	33.9	60.8	77.5	83.2
92.5°	8.6	30.4	56.3	72.9	78.6
95°	8.0	27.6	52.8	69.5	74.0
97.5°	7.5	25.3	49.4	65.4	70.6
100°	6.9	22.4	46.5	62.0	67.2
102.5°	6.3	20.1	43.1	58.5	63.7
105°	5.7	17.8	40.2	55.1	60.3
107.5°	5.2	15.5	37.3	51.7	56.8
110°	4.6	13.2	34.4	48.2	53.4



TEST NUMBER: P243548

CATALOG NUMBER: S124DRP-H575D935-X4F0-XX-UDD-D-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	11.5	31.0	44.8	49.9
115°	4.0	9.2	28.1	41.3	46.5
117.5°	3.4	6.9	25.3	37.9	42.5
120°	3.4	5.2	22.4	34.4	39.0
122.5°	2.9	3.4	19.5	31.6	35.6
125°	2.3	1.7	16.6	28.1	32.1
127.5°	2.3	1.7	13.8	24.7	28.7
130°	1.7	1.7	10.9	21.2	25.3
132.5°	1.7	1.1	8.0	18.4	21.8
135°	1.1	1.1	5.2	14.9	18.4
137.5°	1.1	0.6	3.4	12.1	15.5
140°	1.1	0.6	1.1	9.2	12.1
142.5°	0.6	0.6	0.0	6.3	8.6
145°	0.6	0.0	0.0	3.4	5.7
147.5°	0.6	0.0	0.0	0.6	2.9
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P243548

CATALOG NUMBER: S124DRP-H575D935-X4F0-XX-UDD-D-W

**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.24	16.77	15.72	17.23	17.73	16.82	18.35	17.30	18.81	19.31
	3H	16.89	18.28	17.38	18.76	19.29	19.13	20.52	19.62	21.00	21.54
	4H	17.46	18.78	17.97	19.27	19.82	20.20	21.52	20.71	22.01	22.56
	6H	17.84	19.07	18.37	19.58	20.14	21.25	22.48	21.77	22.98	23.55
	8H	17.95	19.13	18.49	19.66	20.23	21.76	22.94	22.30	23.47	24.04
	12H	18.01	19.14	18.56	19.66	20.27	22.32	23.44	22.86	23.97	24.57
4H	2H	16.10	17.42	16.61	17.91	18.46	17.32	18.64	17.83	19.13	19.68
	3H	17.98	19.11	18.51	19.64	20.21	19.86	20.98	20.38	21.51	22.09
	4H	18.70	19.72	19.24	20.27	20.87	21.08	22.11	21.63	22.65	23.26
	6H	19.21	20.12	19.78	20.69	21.31	22.30	23.21	22.87	23.78	24.40
	8H	19.37	20.22	19.94	20.79	21.42	22.91	23.76	23.48	24.33	24.97
	12H	19.47	20.24	20.06	20.84	21.48	23.57	24.34	24.16	24.94	25.58
8H	4H	19.28	20.13	19.85	20.70	21.33	21.34	22.19	21.90	22.76	23.39
	6H	19.97	20.69	20.57	21.30	21.94	22.72	23.44	23.32	24.05	24.69
	8H	20.22	20.87	20.83	21.49	22.14	23.46	24.11	24.07	24.73	25.38
	12H	20.41	20.99	21.02	21.60	22.32	24.28	24.86	24.90	25.47	26.19
12H	4H	19.41	20.18	20.00	20.78	21.42	21.35	22.12	21.94	22.72	23.36
	6H	20.18	20.83	20.80	21.46	22.11	22.77	23.42	23.38	24.04	24.69
	8H	20.52	21.10	21.14	21.71	22.43	23.58	24.15	24.19	24.76	25.48