

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: P242722

Luminaire Tested: S124RDRP-S575D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242722  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S575D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

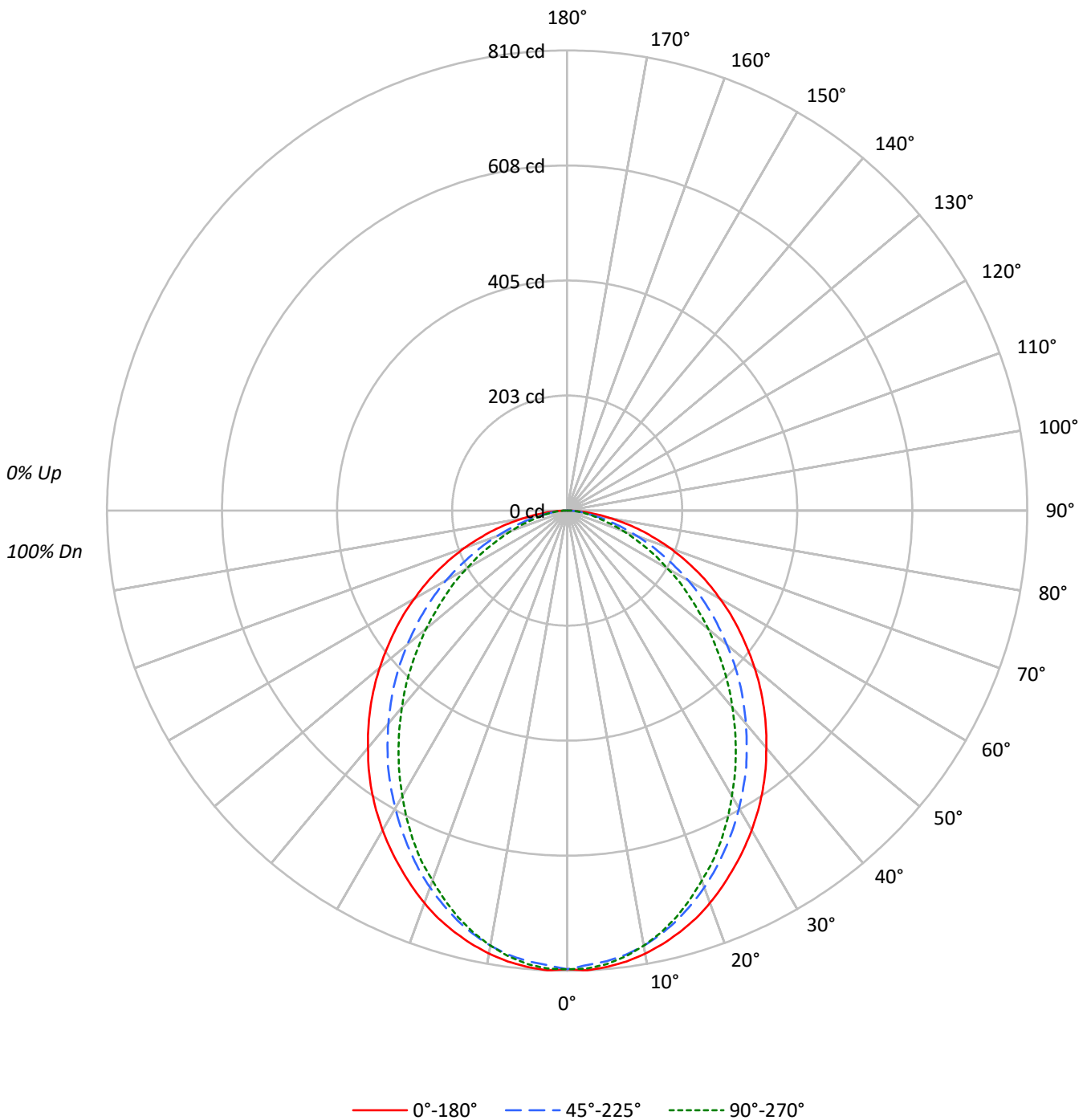
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1865.6 lumens  
Efficiency: N/A  
Efficacy: 99.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
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

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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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87				85	
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74				72	
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64				62	
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56				54	
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49				47	
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43				41	
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39				37	
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35				33	
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32				30	
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29				27	

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

	0°	45°	90°
0°	7177	7177	7177
5°	7194	7105	7149
10°	7148	7020	7020
15°	7066	6872	6821
20°	6954	6678	6555
25°	6810	6452	6288
30°	6669	6212	5952
35°	6514	5964	5616
40°	6327	5681	5251
45°	6155	5402	4880
50°	5959	5078	4489
55°	5748	4742	4062
60°	5516	4375	3627
65°	5305	3914	3199
70°	4998	3407	2716
75°	4609	2823	2208
80°	4018	2150	2027
85°	3406	1958	1826

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6155 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.9	4.1
10°-20°	211.7	11.3
20°-30°	305.6	16.4
30°-40°	346.4	18.6
40°-50°	334.4	17.9
50°-60°	278.0	14.9
60°-70°	191.9	10.3
70°-80°	97.0	5.2
80°-90°	24.6	1.3
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°	593.2	31.8
0°-40°	939.6	50.4
0°-60°	1552.1	83.2
0°-90°	1865.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1865.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	807	807	807	807	807	
5°	806	804	796	802	801	77
15°	768	762	747	746	741	216
25°	694	683	658	647	641	320
35°	600	580	550	529	518	375
45°	490	467	430	399	388	378
55°	371	346	306	274	262	332
65°	252	226	186	160	152	249
75°	134	111	82	68	64	142
85°	33	21	19	18	18	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	807.4	807.4	807.4	807.4	807.4
2.5°	809.9	807.4	800.6	807.4	806.8
5°	806.2	803.7	796.3	802.4	801.2
7.5°	800.6	798.1	788.8	793.2	791.3
10°	791.9	788.8	777.7	780.2	777.7
12.5°	780.8	777.1	763.5	764.7	761.0
15°	767.8	762.3	746.8	745.6	741.2
17.5°	753.0	745.0	727.0	723.9	717.8
20°	735.1	727.0	706.0	701.1	693.0
22.5°	715.3	706.0	683.1	675.1	668.9
25°	694.3	683.1	657.8	647.3	641.1
27.5°	672.6	659.0	632.4	620.1	611.4
30°	649.7	634.3	605.2	589.8	579.9
32.5°	625.6	607.7	577.4	558.9	549.6
35°	600.3	580.5	549.6	528.6	517.5
37.5°	573.7	553.3	519.3	496.4	485.3
40°	545.3	524.9	489.6	463.7	452.5
42.5°	518.1	496.4	459.3	432.8	421.0
45°	489.6	466.8	429.7	399.4	388.2
47.5°	460.6	437.1	398.8	367.2	354.9
50°	430.9	406.8	367.2	336.3	324.6
52.5°	400.6	377.1	336.3	304.8	292.4
55°	370.9	346.2	306.0	273.9	262.1
57.5°	341.9	315.9	276.3	243.6	234.9
60°	310.3	285.6	246.1	213.9	204.0
62.5°	281.9	255.9	215.1	186.1	178.7
65°	252.2	225.7	186.1	159.5	152.1
67.5°	221.3	196.0	158.9	135.4	126.7
70°	192.3	166.3	131.1	110.7	104.5
72.5°	161.4	138.5	105.7	89.0	83.5
75°	134.2	111.3	82.2	68.0	64.3
77.5°	105.7	85.9	61.2	51.3	50.1
80°	78.5	60.6	42.0	40.2	39.6
82.5°	55.0	38.9	30.3	29.1	28.4
85°	33.4	21.0	19.2	17.9	17.9
87.5°	14.2	9.3	8.7	8.0	8.7
90°	0.0	0.0	0.0	0.0	0.0



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**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	18.19	19.76	18.56	20.07	20.38	16.22	17.79	16.59	18.10	18.42
	3H	19.96	21.37	20.34	21.70	22.06	17.47	18.88	17.85	19.21	19.57
	4H	20.62	21.95	21.02	22.29	22.67	17.85	19.17	18.25	19.52	19.90
	6H	21.10	22.32	21.51	22.69	23.08	18.11	19.34	18.53	19.70	20.09
	8H	21.25	22.41	21.67	22.80	23.20	18.21	19.37	18.63	19.76	20.16
	12H	21.35	22.46	21.78	22.84	23.27	18.27	19.39	18.70	19.77	20.20
4H	2H	18.53	19.85	18.93	20.20	20.58	16.92	18.24	17.32	18.59	18.97
	3H	20.49	21.60	20.90	21.99	22.40	18.35	19.45	18.76	19.85	20.25
	4H	21.28	22.27	21.71	22.68	23.12	18.80	19.80	19.24	20.21	20.65
	6H	21.87	22.74	22.33	23.18	23.64	19.15	20.02	19.61	20.46	20.92
	8H	22.06	22.87	22.53	23.32	23.78	19.28	20.09	19.74	20.53	21.00
	12H	22.20	22.93	22.69	23.41	23.88	19.38	20.10	19.86	20.58	21.05
8H	4H	21.37	22.18	21.83	22.62	23.09	19.12	19.93	19.58	20.37	20.84
	6H	22.04	22.71	22.54	23.20	23.68	19.55	20.22	20.05	20.71	21.19
	8H	22.28	22.88	22.80	23.39	23.88	19.73	20.33	20.24	20.84	21.33
	12H	22.48	23.01	22.99	23.50	24.06	19.89	20.42	20.39	20.91	21.47
12H	4H	21.36	22.08	21.84	22.56	23.03	19.16	19.88	19.64	20.36	20.83
	6H	22.03	22.63	22.54	23.14	23.63	19.60	20.20	20.11	20.71	21.20
	8H	22.31	22.84	22.82	23.33	23.90	19.83	20.36	20.34	20.85	21.42