

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: P1060284

Luminaire Tested: S124RDRP-S1020D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060284  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S1020D940-X4F0-XX-UDD-BVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

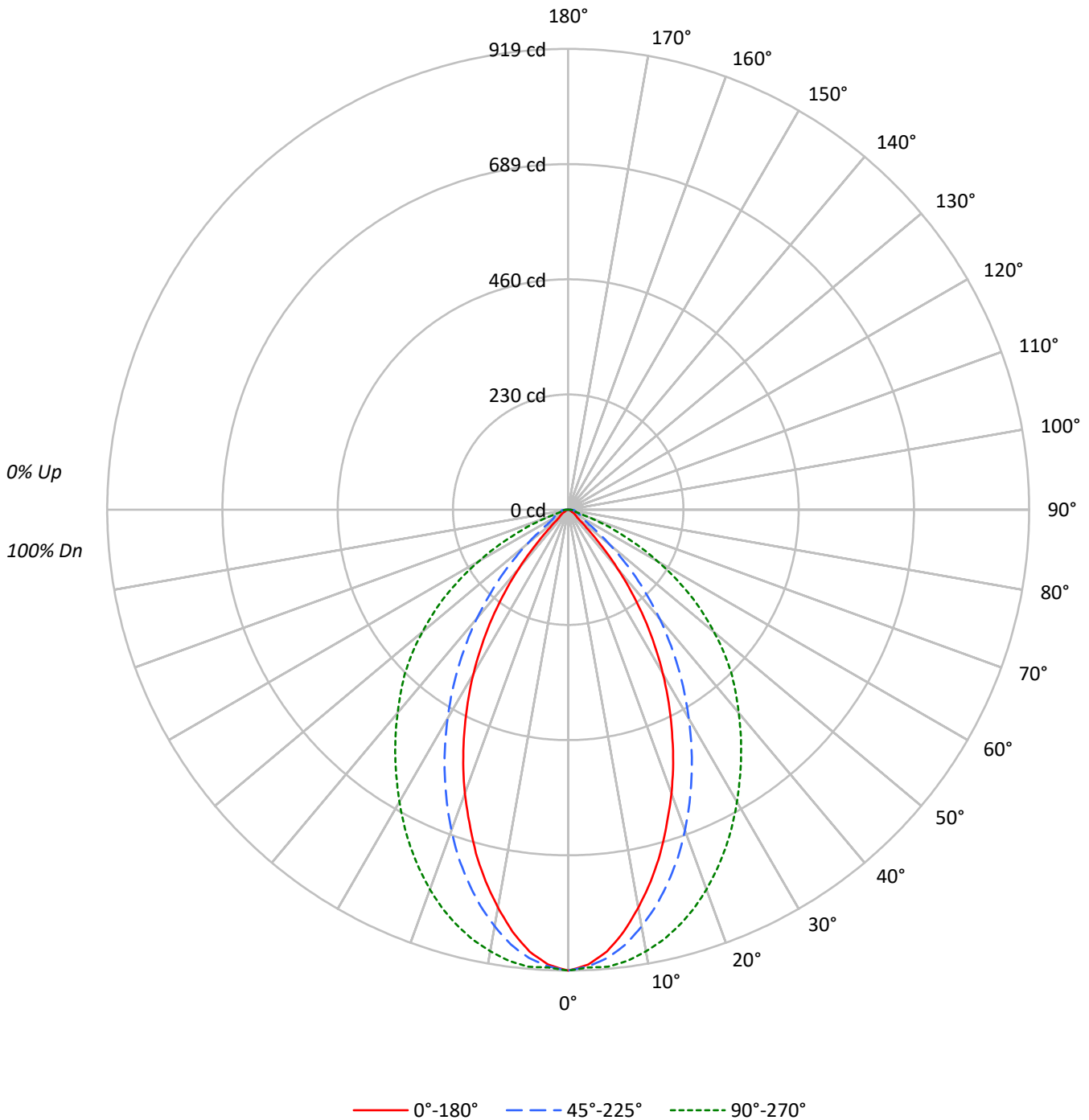
Lumens per Lamp: N/A  
Luminaire Lumens: 1158.4 lumens  
Efficiency: N/A  
Efficacy: 33.1 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				72
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				65
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				59
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				49
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				39

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

	0°	45°	90°
0°	7914	7914	7914
5°	7647	7758	7908
10°	7046	7376	7820
15°	6328	6856	7645
20°	5516	6238	7384
25°	4653	5535	7061
30°	3755	4784	6693
35°	2778	4003	6317
40°	1722	3189	5942
45°	683	2325	5596
50°	304	1460	5087
55°	243	761	4454
60°	167	575	3548
65°	110	571	2439
70°	108	516	1141
75°	143	502	502
80°	213	590	590
85°	425	1176	850

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5596 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.3	7.3
10°-20°	217.6	18.8
20°-30°	274.7	23.7
30°-40°	252.0	21.8
40°-50°	171.6	14.8
50°-60°	93.5	8.1
60°-70°	40.5	3.5
70°-80°	14.7	1.3
80°-90°	9.5	0.8
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°	576.6	49.8
0°-40°	828.5	71.5
0°-60°	1093.6	94.4
0°-90°	1158.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1158.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	919	919	919	919	919	
5°	885	896	898	907	915	82
15°	710	735	769	824	858	197
25°	490	524	582	675	743	224
35°	264	303	381	502	601	163
45°	56	94	191	339	460	52
55°	16	17	51	187	297	14
65°	5	8	28	58	120	6
75°	4	14	15	15	15	5
85°	4	10	12	12	9	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	919.1	919.1	919.1	919.1	919.1
2.5°	908.3	919.1	911.5	913.7	913.7
5°	884.6	896.4	897.5	907.2	914.8
7.5°	849.0	866.2	874.9	894.3	907.2
10°	805.8	826.3	843.6	877.0	894.3
12.5°	759.4	783.2	809.1	853.3	878.1
15°	709.8	734.6	769.1	824.2	857.6
17.5°	654.8	685.0	727.1	792.9	833.9
20°	601.9	632.1	680.7	755.1	805.8
22.5°	546.9	578.2	632.1	715.2	775.6
25°	489.7	524.3	582.5	675.3	743.2
27.5°	433.7	470.3	531.8	633.2	708.7
30°	377.6	414.2	481.1	590.1	673.1
32.5°	320.4	358.1	430.4	544.8	636.5
35°	264.3	303.1	380.8	501.6	600.9
37.5°	207.1	248.1	331.2	459.5	565.3
40°	153.2	194.2	283.7	417.5	528.6
42.5°	102.5	143.5	235.2	376.5	494.1
45°	56.1	93.8	190.9	338.7	459.5
47.5°	30.2	51.8	147.8	302.0	420.7
50°	22.7	28.0	109.0	263.2	379.7
52.5°	19.4	21.6	75.5	222.2	338.7
55°	16.2	17.3	50.7	186.6	296.7
57.5°	12.9	14.0	37.8	151.0	251.3
60°	9.7	11.9	33.4	116.5	206.0
62.5°	7.6	9.7	31.3	85.2	162.9
65°	5.4	7.6	28.0	58.3	119.7
67.5°	5.4	8.6	23.7	37.8	80.9
70°	4.3	11.9	20.5	24.8	45.3
72.5°	4.3	12.9	17.3	17.3	17.3
75°	4.3	14.0	15.1	15.1	15.1
77.5°	4.3	12.9	14.0	12.9	12.9
80°	4.3	11.9	11.9	11.9	11.9
82.5°	4.3	10.8	11.9	11.9	9.7
85°	4.3	9.7	11.9	11.9	8.6
87.5°	3.2	9.7	10.8	10.8	6.5
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	0.00	0.00	0.00	0.00	0.11	15.60	16.87	15.96	17.19	17.50
	3H	0.00	0.77	0.02	1.10	1.47	15.97	17.10	16.35	17.43	17.80
	4H	0.86	1.91	1.26	2.26	2.65	15.95	17.00	16.35	17.35	17.74
	6H	2.04	3.01	2.46	3.38	3.77	15.94	16.90	16.35	17.27	17.67
	8H	2.63	3.55	3.06	3.94	4.34	15.94	16.85	16.37	17.24	17.65
	12H	3.30	4.17	3.73	4.56	4.99	15.95	16.82	16.38	17.21	17.64
4H	2H	1.83	2.88	2.23	3.23	3.62	15.41	16.46	15.81	16.81	17.19
	3H	3.42	4.28	3.83	4.68	5.09	15.83	16.68	16.24	17.09	17.49
	4H	4.71	5.48	5.15	5.90	6.34	15.82	16.59	16.26	17.01	17.46
	6H	5.84	6.50	6.30	6.95	7.42	15.86	16.53	16.33	16.97	17.44
	8H	6.35	6.97	6.82	7.41	7.89	15.89	16.51	16.36	16.96	17.43
	12H	6.90	7.44	7.39	7.93	8.40	15.96	16.50	16.44	16.99	17.46
8H	4H	5.80	6.41	6.27	6.86	7.33	15.73	16.35	16.20	16.80	17.27
	6H	7.34	7.85	7.85	8.35	8.83	15.81	16.32	16.32	16.82	17.30
	8H	8.15	8.61	8.68	9.12	9.62	15.90	16.35	16.42	16.87	17.36
	12H	8.98	9.39	9.50	9.88	10.45	16.07	16.47	16.58	16.96	17.54
12H	4H	5.99	6.53	6.47	7.02	7.49	15.70	16.24	16.18	16.73	17.20
	6H	7.70	8.16	8.22	8.67	9.17	15.79	16.24	16.31	16.76	17.25
	8H	8.72	9.12	9.23	9.61	10.18	15.92	16.33	16.44	16.82	17.39