

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



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060857

Luminaire Tested: S124RDR-H350D940-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060857  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D940-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

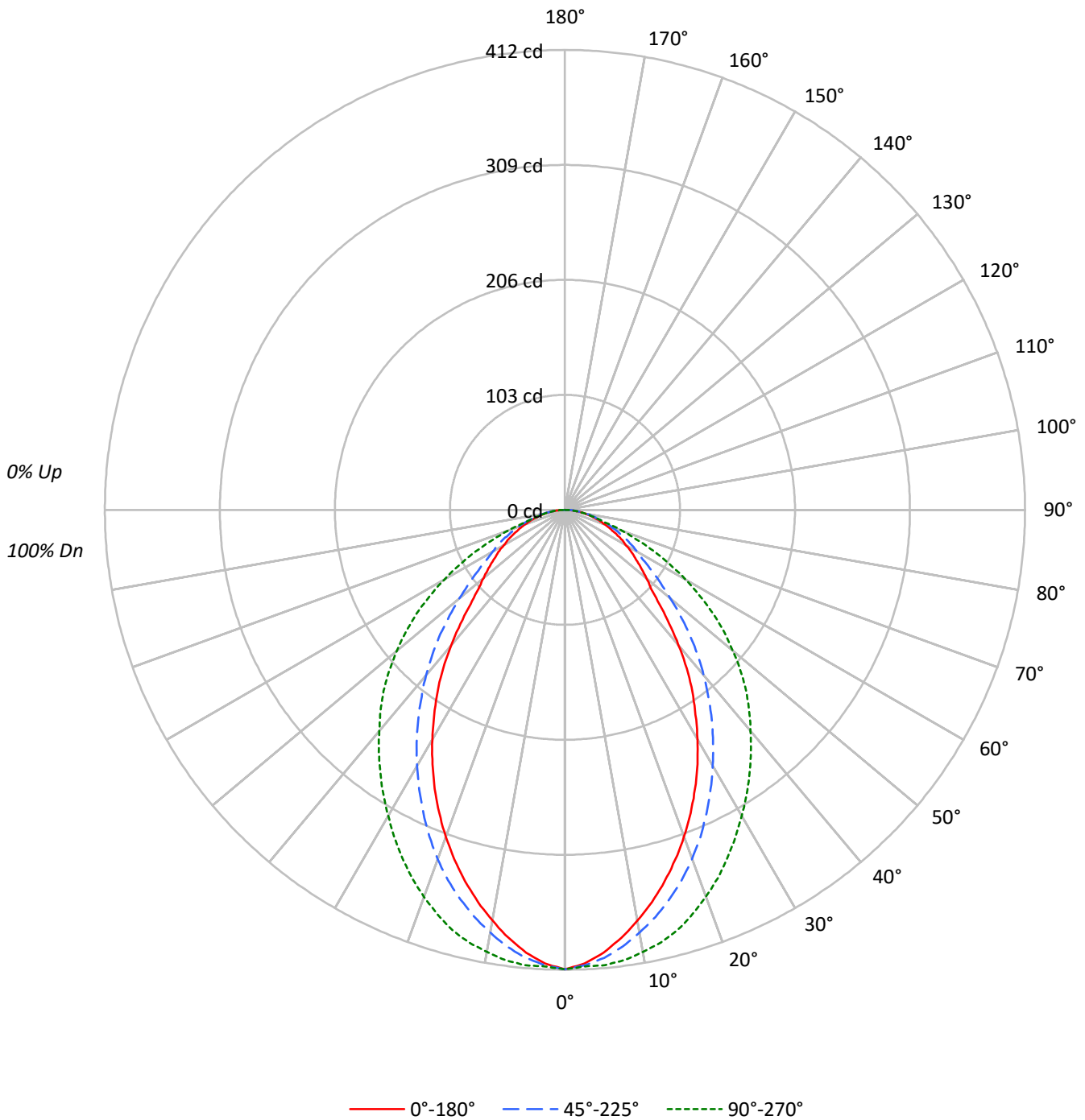
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 755.3 lumens  
Efficiency: N/A  
Efficacy: 64.6 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V): 120  
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: 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	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89				87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77				75	
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67				65	
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59				57	
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52				50	
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47				45	
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42				40	
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38				37	
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35				33	
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32				31	

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

	0°	45°	90°
0°	3544	3544	3544
5°	3441	3483	3539
10°	3268	3363	3516
15°	3072	3221	3474
20°	2857	3051	3381
25°	2620	2848	3270
30°	2362	2633	3147
35°	2091	2408	3029
40°	1777	2174	2907
45°	1455	1920	2795
50°	1274	1649	2630
55°	1170	1422	2434
60°	1085	1280	2146
65°	1017	1202	1795
70°	954	1100	1347
75°	898	1005	981
80°	833	922	833
85°	751	899	721

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2795 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.0	5.0
10°-20°	102.3	13.6
20°-30°	139.9	18.5
30°-40°	147.0	19.5
40°-50°	127.6	16.9
50°-60°	96.2	12.7
60°-70°	62.4	8.3
70°-80°	32.0	4.2
80°-90°	9.7	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°	280.3	37.1
0°-40°	427.3	56.6
0°-60°	651.2	86.2
0°-90°	755.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	755.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	412	412	412	412	412	
5°	398	404	403	406	409	37
15°	345	353	361	378	390	97
25°	276	286	300	323	344	126
35°	199	210	229	260	288	124
45°	120	131	158	197	230	94
55°	78	80	95	134	162	70
65°	50	51	59	71	88	50
75°	27	30	30	31	30	29
85°	8	10	9	9	7	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	411.6	411.6	411.6	411.6	411.6
2.5°	406.9	412.0	408.3	409.1	409.4
5°	398.1	403.6	402.9	406.1	409.4
7.5°	386.8	393.4	394.8	401.4	406.9
10°	373.7	381.0	384.6	395.2	402.1
12.5°	359.9	367.2	373.7	387.2	397.0
15°	344.6	353.0	361.3	377.7	389.7
17.5°	328.6	337.3	347.9	365.7	379.9
20°	311.8	320.5	332.9	352.2	369.0
22.5°	294.0	303.8	316.9	337.7	357.3
25°	275.7	285.6	299.8	322.7	344.2
27.5°	256.8	267.0	282.3	307.8	330.7
30°	237.5	248.4	264.8	291.8	316.5
32.5°	217.8	229.5	247.0	275.7	302.7
35°	198.9	209.8	229.1	259.7	288.1
37.5°	179.2	190.1	210.9	244.0	273.6
40°	158.1	170.1	193.4	227.7	258.6
42.5°	138.4	150.4	175.6	212.0	244.4
45°	119.5	130.8	157.7	197.1	229.5
47.5°	104.9	112.9	139.9	182.5	213.5
50°	95.1	98.7	123.1	166.5	196.3
52.5°	86.3	89.2	107.8	150.4	179.6
55°	77.9	80.1	94.7	134.4	162.1
57.5°	70.7	71.8	83.0	118.4	143.2
60°	63.0	64.5	74.3	102.0	124.6
62.5°	56.8	57.6	66.7	86.3	106.0
65°	49.9	51.0	59.0	71.4	88.1
67.5°	43.7	45.5	51.0	58.3	69.6
70°	37.9	40.4	43.7	47.4	53.5
72.5°	32.4	35.3	37.2	38.6	37.5
75°	27.0	30.2	30.2	30.6	29.5
77.5°	21.9	24.8	24.4	24.0	22.6
80°	16.8	19.3	18.6	18.2	16.8
82.5°	12.4	14.2	13.5	13.1	11.3
85°	7.6	9.5	9.1	8.7	7.3
87.5°	3.6	5.5	5.1	4.7	3.3
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	10.90	12.39	11.27	12.70	13.02	14.64	16.13	15.00	16.44	16.75
	3H	12.57	13.90	12.95	14.23	14.59	15.76	17.10	16.14	17.43	17.79
	4H	13.23	14.48	13.63	14.83	15.21	16.06	17.31	16.46	17.66	18.04
	6H	13.74	14.90	14.16	15.26	15.66	16.26	17.41	16.67	17.78	18.17
	8H	13.92	15.02	14.35	15.41	15.81	16.32	17.41	16.74	17.80	18.20
	12H	14.04	15.09	14.47	15.47	15.90	16.35	17.40	16.78	17.78	18.21
4H	2H	11.69	12.94	12.09	13.29	13.67	14.80	16.05	15.20	16.40	16.78
	3H	13.56	14.60	13.97	15.00	15.40	16.13	17.17	16.55	17.57	17.97
	4H	14.37	15.30	14.80	15.72	16.15	16.55	17.48	16.98	17.90	18.34
	6H	15.01	15.82	15.47	16.27	16.73	16.87	17.68	17.33	18.13	18.59
	8H	15.24	15.99	15.70	16.44	16.91	16.97	17.72	17.43	18.17	18.64
	12H	15.40	16.08	15.88	16.55	17.03	17.04	17.71	17.52	18.19	18.66
8H	4H	14.72	15.47	15.18	15.92	16.38	16.68	17.44	17.15	17.89	18.35
	6H	15.51	16.13	16.00	16.62	17.10	17.10	17.73	17.60	18.22	18.70
	8H	15.83	16.39	16.34	16.90	17.39	17.26	17.82	17.78	18.33	18.82
	12H	16.09	16.58	16.60	17.08	17.64	17.40	17.90	17.91	18.39	18.95
12H	4H	14.75	15.42	15.23	15.90	16.37	16.69	17.36	17.17	17.84	18.31
	6H	15.57	16.13	16.08	16.64	17.13	17.12	17.69	17.64	18.20	18.69
	8H	15.95	16.45	16.46	16.94	17.51	17.33	17.83	17.84	18.32	18.89