

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: P1060290

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060290  
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: S124RDRP-S1020D940-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

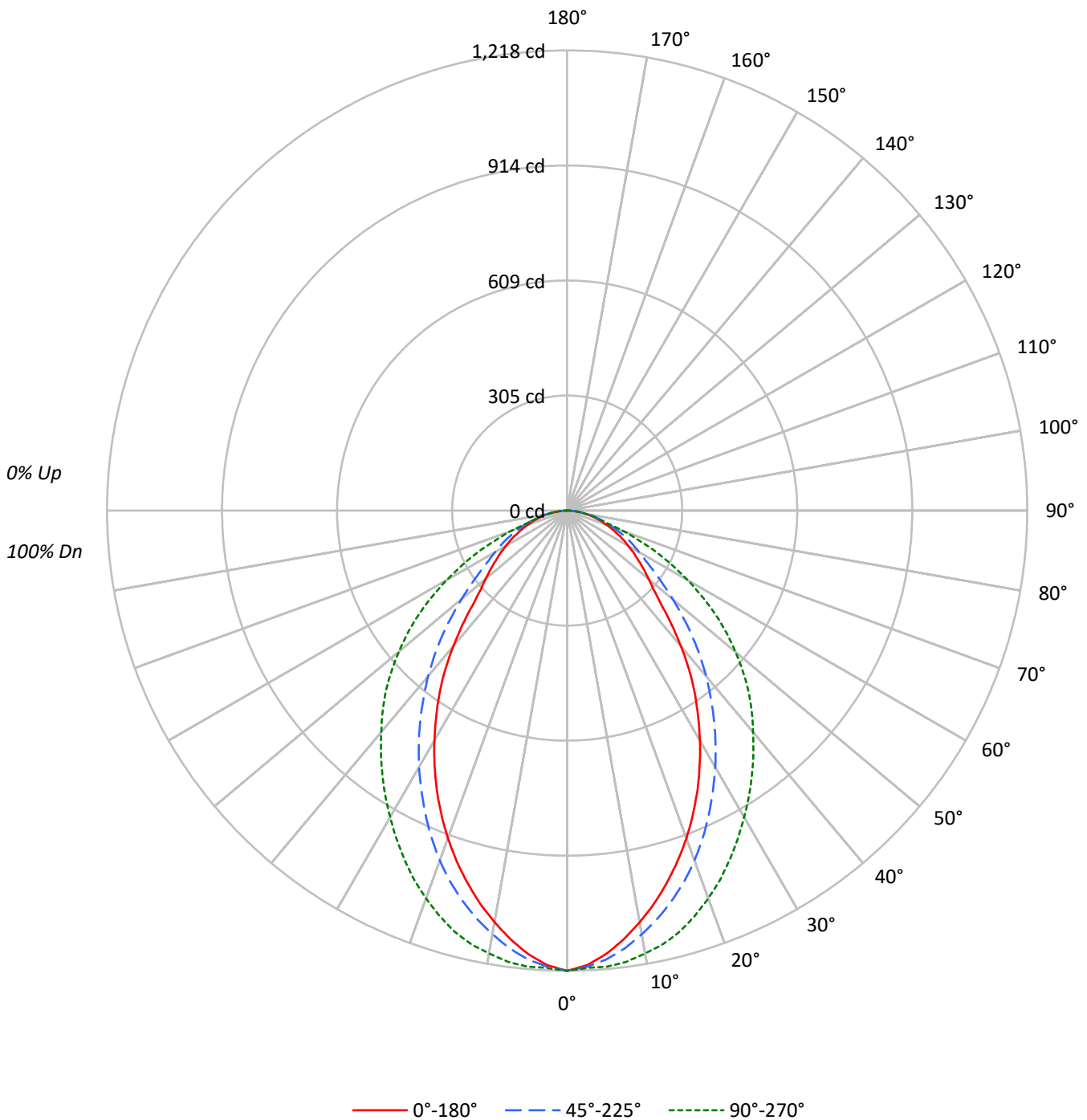
Lumens per Lamp: N/A  
Luminaire Lumens: 2235.4 lumens  
Efficiency: N/A  
Efficacy: 63.9 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	10490	10490	10490
5°	10185	10306	10474
10°	9672	9954	10407
15°	9091	9534	10283
20°	8456	9030	10008
25°	7754	8430	9680
30°	6989	7794	9315
35°	6188	7128	8964
40°	5260	6435	8604
45°	4306	5685	8271
50°	3770	4882	7785
55°	3464	4208	7202
60°	3212	3787	6350
65°	3009	3558	5316
70°	2822	3258	3991
75°	2655	2978	2905
80°	2460	2727	2460
85°	2233	2668	2134

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8271 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.6	5.0
10°-20°	302.9	13.6
20°-30°	414.1	18.5
30°-40°	435.2	19.5
40°-50°	377.6	16.9
50°-60°	284.9	12.7
60°-70°	184.6	8.3
70°-80°	94.8	4.2
80°-90°	28.7	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°	829.6	37.1
0°-40°	1264.7	56.6
0°-60°	1927.2	86.2
0°-90°	2235.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2235.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1178	1194	1192	1202	1212	110
15°	1020	1045	1069	1118	1154	286
25°	816	845	887	955	1019	374
35°	589	621	678	769	853	366
45°	354	387	467	583	679	278
55°	231	237	280	398	480	208
65°	148	151	175	211	261	147
75°	80	90	90	91	87	85
85°	23	28	27	26	22	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1218.2	1218.2	1218.2	1218.2	1218.2
2.5°	1204.2	1219.3	1208.5	1210.7	1211.7
5°	1178.3	1194.5	1192.3	1202.0	1211.7
7.5°	1144.9	1164.3	1168.6	1188.0	1204.2
10°	1106.1	1127.7	1138.4	1169.7	1190.2
12.5°	1065.1	1086.7	1106.1	1146.0	1175.1
15°	1019.8	1044.6	1069.4	1118.0	1153.5
17.5°	972.4	998.3	1029.6	1082.4	1124.4
20°	922.8	948.7	985.4	1042.5	1092.1
22.5°	870.0	899.1	937.9	999.4	1057.6
25°	816.1	845.2	887.2	955.2	1018.8
27.5°	760.0	790.2	835.5	911.0	978.9
30°	702.9	735.2	783.8	863.5	936.8
32.5°	644.7	679.2	730.9	816.1	895.9
35°	588.6	621.0	678.1	768.7	852.7
37.5°	530.4	562.7	624.2	722.3	809.6
40°	467.9	503.5	572.5	673.8	765.4
42.5°	409.7	445.2	519.6	627.4	723.4
45°	353.6	387.0	466.8	583.2	679.2
47.5°	310.5	334.2	414.0	540.1	631.7
50°	281.4	292.2	364.4	492.7	581.1
52.5°	255.5	264.1	319.1	445.2	531.5
55°	230.7	237.2	280.3	397.8	479.7
57.5°	209.1	212.4	245.8	350.4	423.7
60°	186.5	190.8	219.9	301.9	368.7
62.5°	168.2	170.3	197.3	255.5	313.7
65°	147.7	150.9	174.6	211.3	260.9
67.5°	129.4	134.8	150.9	172.5	205.9
70°	112.1	119.7	129.4	140.1	158.5
72.5°	95.9	104.6	110.0	114.3	111.0
75°	79.8	89.5	89.5	90.6	87.3
77.5°	64.7	73.3	72.2	71.2	66.8
80°	49.6	57.1	55.0	53.9	49.6
82.5°	36.7	42.0	39.9	38.8	33.4
85°	22.6	28.0	27.0	25.9	21.6
87.5°	10.8	16.2	15.1	14.0	9.7
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	14.67	16.16	15.03	16.47	16.78	18.41	19.89	18.77	20.21	20.52
	3H	16.34	17.67	16.72	18.00	18.36	19.53	20.87	19.91	21.19	21.56
	4H	17.00	18.25	17.40	18.60	18.98	19.83	21.08	20.23	21.43	21.81
	6H	17.51	18.66	17.92	19.03	19.42	20.03	21.18	20.44	21.55	21.94
	8H	17.69	18.78	18.11	19.17	19.58	20.08	21.18	20.51	21.57	21.97
	12H	17.81	18.86	18.24	19.24	19.67	20.12	21.17	20.55	21.55	21.98
4H	2H	15.46	16.71	15.86	17.06	17.44	18.57	19.82	18.97	20.17	20.55
	3H	17.33	18.37	17.74	18.77	19.17	19.90	20.94	20.31	21.34	21.74
	4H	18.14	19.07	18.57	19.49	19.93	20.32	21.25	20.75	21.67	22.11
	6H	18.78	19.59	19.24	20.03	20.49	20.64	21.45	21.10	21.89	22.36
	8H	19.00	19.76	19.47	20.21	20.67	20.74	21.49	21.20	21.94	22.41
	12H	19.17	19.84	19.65	20.32	20.80	20.81	21.48	21.29	21.96	22.43
8H	4H	18.49	19.24	18.95	19.69	20.16	20.45	21.21	20.92	21.65	22.12
	6H	19.28	19.90	19.77	20.39	20.87	20.87	21.50	21.37	21.99	22.47
	8H	19.59	20.15	20.11	20.67	21.15	21.03	21.59	21.54	22.10	22.59
	12H	19.86	20.35	20.37	20.85	21.41	21.17	21.67	21.68	22.16	22.72
12H	4H	18.52	19.19	19.00	19.67	20.14	20.46	21.13	20.94	21.61	22.08
	6H	19.34	19.90	19.85	20.41	20.90	20.89	21.46	21.41	21.97	22.46
	8H	19.72	20.22	20.23	20.71	21.28	21.10	21.60	21.61	22.09	22.66