

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: P1056130

Luminaire Tested: S124R3DR-H1195D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056130  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-H1195D930-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

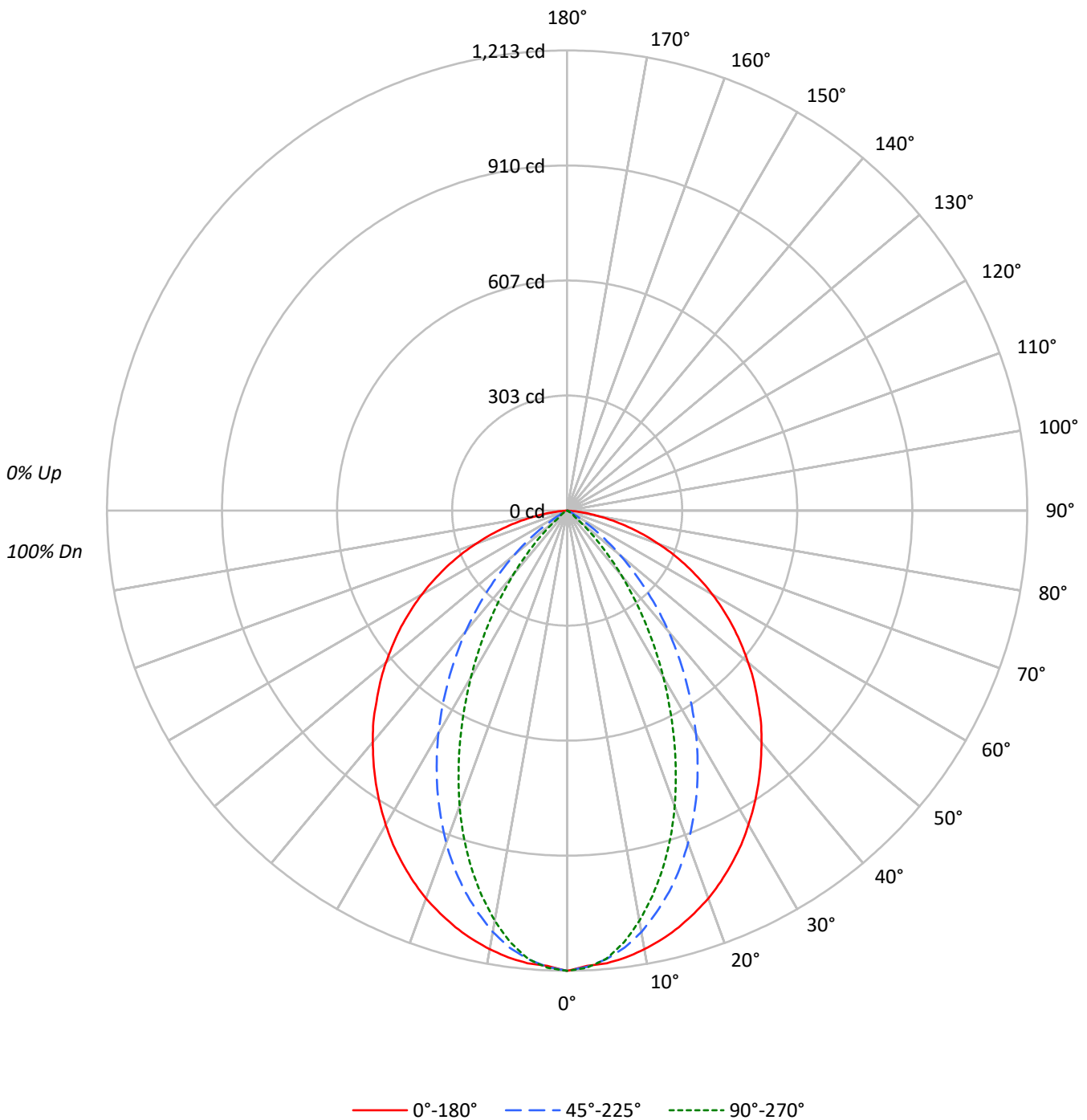
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1695.7 lumens  
Efficiency: N/A  
Efficacy: 46.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

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

	0°	45°	90°
0°	10726	10726	10726
5°	10630	10535	10525
10°	10540	10123	9856
15°	10408	9516	8927
20°	10240	8774	7800
25°	10014	7902	6510
30°	9763	6934	5173
35°	9487	5880	3851
40°	9197	4791	2567
45°	8879	3659	1413
50°	8573	2503	392
55°	8233	1356	257
60°	7825	421	147
65°	7316	274	75
70°	6610	124	31
75°	5688	41	0
80°	4297	0	0
85°	1806	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8879 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.9	6.6
10°-20°	293.8	17.3
20°-30°	379.7	22.4
30°-40°	362.9	21.4
40°-50°	271.4	16.0
50°-60°	161.5	9.5
60°-70°	82.0	4.8
70°-80°	28.5	1.7
80°-90°	3.9	0.2
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°	785.4	46.3
0°-40°	1148.3	67.7
0°-60°	1581.3	93.3
0°-90°	1695.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1695.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1213	1213	1213	1213	1213	
5°	1198	1207	1187	1181	1186	114
15°	1137	1113	1040	991	975	320
25°	1026	955	810	703	667	473
35°	879	758	545	406	357	550
45°	710	545	293	156	113	549
55°	534	332	88	20	17	477
65°	350	134	13	5	4	346
75°	166	18	1	1	0	177
85°	18	0	0	0	0	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1213.2	1213.2	1213.2	1213.2	1213.2
2.5°	1201.3	1215.6	1203.7	1204.9	1206.1
5°	1197.7	1207.3	1187.0	1181.1	1185.9
7.5°	1188.2	1191.8	1162.1	1146.6	1147.8
10°	1174.0	1170.4	1127.6	1101.4	1097.8
12.5°	1157.3	1145.4	1085.9	1047.9	1039.6
15°	1137.1	1113.3	1039.6	990.8	975.3
17.5°	1113.3	1078.8	988.4	924.2	905.2
20°	1088.3	1040.7	932.5	852.8	829.0
22.5°	1058.6	997.9	871.8	777.9	748.1
25°	1026.5	955.1	810.0	702.9	667.3
27.5°	993.2	908.7	744.6	626.8	585.2
30°	956.3	860.0	679.2	549.5	506.7
32.5°	918.2	810.0	611.4	478.1	430.6
35°	879.0	757.7	544.8	405.6	356.8
37.5°	838.5	705.3	480.5	336.6	286.7
40°	796.9	651.8	415.1	271.2	222.4
42.5°	756.5	598.3	353.3	209.3	164.1
45°	710.1	544.8	292.6	155.8	113.0
47.5°	668.5	492.4	234.3	105.9	66.6
50°	623.3	436.5	182.0	61.9	28.5
52.5°	578.1	384.2	133.2	27.4	21.4
55°	534.1	331.8	88.0	20.2	16.7
57.5°	487.7	279.5	47.6	15.5	11.9
60°	442.5	228.4	23.8	11.9	8.3
62.5°	396.1	179.6	19.0	7.1	4.8
65°	349.7	134.4	13.1	4.8	3.6
67.5°	303.3	91.6	8.3	2.4	1.2
70°	255.7	55.9	4.8	1.2	1.2
72.5°	210.5	28.5	2.4	1.2	1.2
75°	166.5	17.8	1.2	1.2	0.0
77.5°	123.7	9.5	1.2	1.2	0.0
80°	84.4	3.6	0.0	0.0	0.0
82.5°	48.8	1.2	0.0	0.0	0.0
85°	17.8	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	18.70	20.03	19.06	20.34	20.66	0.00	0.00	0.00	0.00	0.00
	3H	20.24	21.42	20.62	21.75	22.11	0.00	0.00	0.00	0.00	0.00
	4H	20.83	21.93	21.24	22.28	22.66	0.00	0.00	0.00	0.00	0.00
	6H	21.25	22.26	21.67	22.63	23.02	0.00	0.00	0.00	0.00	0.00
	8H	21.35	22.30	21.78	22.69	23.10	0.00	0.00	0.00	0.00	0.00
	12H	21.37	22.28	21.80	22.66	23.09	0.00	0.00	0.00	0.00	0.00
4H	2H	18.48	19.57	18.88	19.92	20.31	0.00	0.00	0.00	0.00	0.19
	3H	20.04	20.93	20.45	21.34	21.74	0.00	0.00	0.00	0.00	0.03
	4H	20.62	21.42	21.06	21.84	22.28	0.00	0.00	0.00	0.00	0.00
	6H	21.08	21.77	21.55	22.22	22.68	0.00	0.00	0.00	0.00	0.00
	8H	21.20	21.84	21.67	22.29	22.76	0.00	0.00	0.00	0.00	0.00
	12H	21.24	21.81	21.73	22.29	22.77	0.00	0.00	0.00	0.00	0.00
8H	4H	20.49	21.13	20.96	21.57	22.05	0.00	0.64	0.47	1.09	1.56
	6H	20.93	21.45	21.43	21.95	22.43	0.00	0.43	0.41	0.93	1.41
	8H	21.04	21.51	21.57	22.03	22.52	0.00	0.32	0.37	0.83	1.33
	12H	21.09	21.51	21.61	22.00	22.57	0.00	0.22	0.32	0.71	1.28
12H	4H	20.44	21.01	20.93	21.49	21.96	0.41	0.98	0.90	1.46	1.94
	6H	20.87	21.33	21.39	21.85	22.34	0.31	0.77	0.83	1.29	1.78
	8H	21.00	21.41	21.52	21.91	22.48	0.26	0.67	0.78	1.17	1.74