

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: P1055992

Luminaire Tested: S124R3DR-S1195D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055992  
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-S1195D927-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

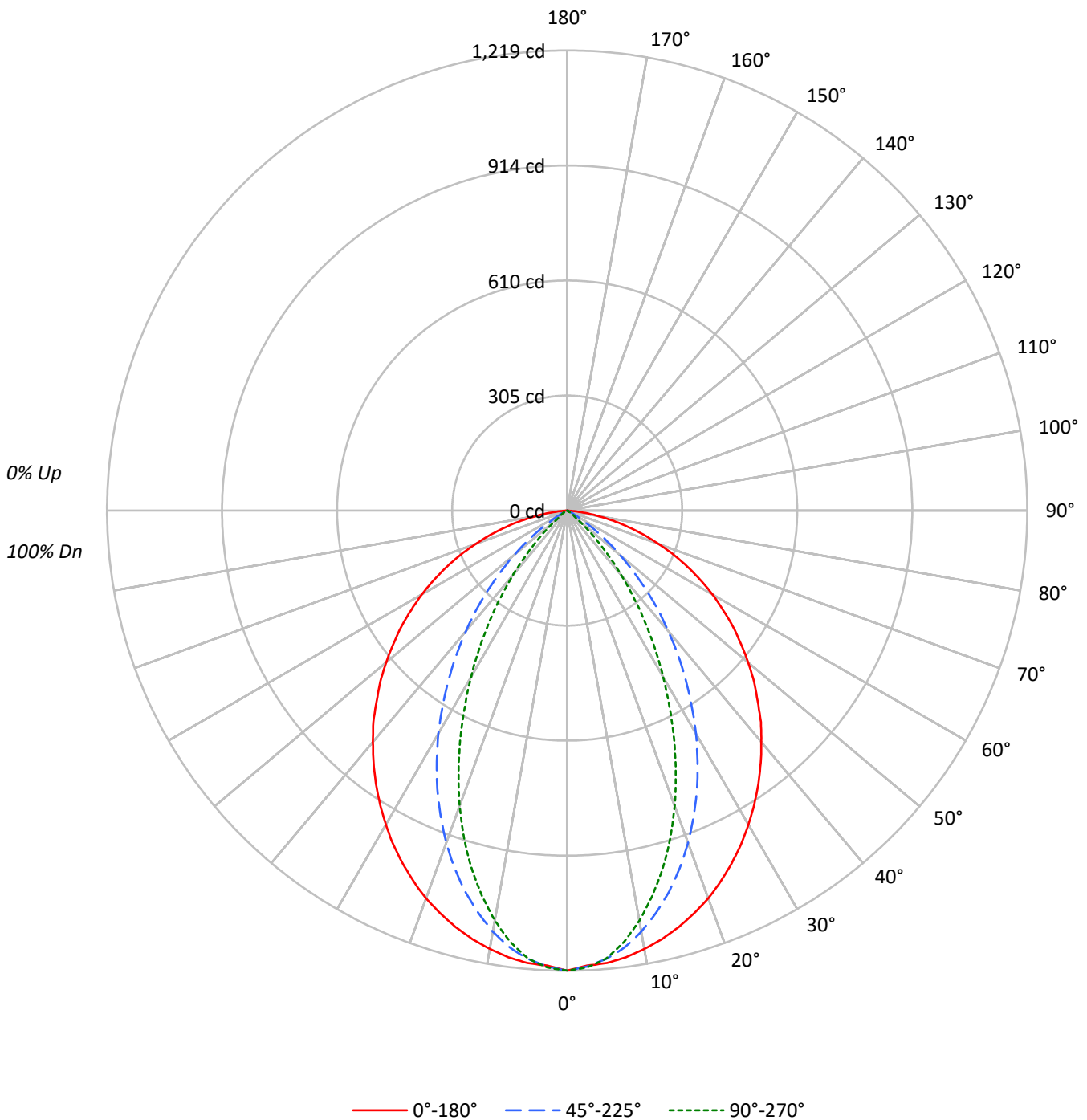
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1703.2 lumens  
Efficiency: N/A  
Efficacy: 40.7 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): 41.9  
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	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°	10774	10774	10774
5°	10678	10582	10571
10°	10587	10168	9900
15°	10455	9558	8967
20°	10286	8813	7835
25°	10059	7937	6538
30°	9807	6965	5196
35°	9529	5906	3868
40°	9239	4813	2578
45°	8919	3675	1419
50°	8610	2514	395
55°	8268	1363	257
60°	7858	423	149
65°	7349	274	75
70°	6641	124	31
75°	5715	41	0
80°	4318	0	0
85°	1816	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8919 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.4	6.6
10°-20°	295.1	17.3
20°-30°	381.4	22.4
30°-40°	364.5	21.4
40°-50°	272.6	16.0
50°-60°	162.2	9.5
60°-70°	82.4	4.8
70°-80°	28.7	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°	788.9	46.3
0°-40°	1153.5	67.7
0°-60°	1588.3	93.3
0°-90°	1703.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1703.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1219	1219	1219	1219	1219	
5°	1203	1213	1192	1186	1191	114
15°	1142	1118	1044	995	980	322
25°	1031	959	814	706	670	475
35°	883	761	547	407	358	552
45°	713	547	294	156	114	551
55°	536	333	88	20	17	479
65°	351	135	13	5	4	347
75°	167	18	1	1	0	178
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°	1218.6	1218.6	1218.6	1218.6	1218.6
2.5°	1206.7	1221.0	1209.1	1210.3	1211.5
5°	1203.1	1212.7	1192.3	1186.4	1191.1
7.5°	1193.5	1197.1	1167.3	1151.7	1152.9
10°	1179.2	1175.6	1132.6	1106.3	1102.7
12.5°	1162.5	1150.5	1090.8	1052.6	1044.2
15°	1142.2	1118.3	1044.2	995.2	979.7
17.5°	1118.3	1083.6	992.8	928.3	909.2
20°	1093.2	1045.4	936.7	856.6	832.7
22.5°	1063.3	1002.4	875.7	781.4	751.5
25°	1031.1	959.4	813.6	706.1	670.2
27.5°	997.6	912.8	747.9	629.6	587.8
30°	960.6	863.8	682.2	552.0	509.0
32.5°	922.3	813.6	614.1	480.3	432.5
35°	882.9	761.0	547.2	407.4	358.4
37.5°	842.3	708.5	482.7	338.1	287.9
40°	800.5	654.7	417.0	272.4	223.4
42.5°	759.8	600.9	354.8	210.3	164.9
45°	713.3	547.2	293.9	156.5	113.5
47.5°	671.4	494.6	235.4	106.3	66.9
50°	626.0	438.5	182.8	62.1	28.7
52.5°	580.6	385.9	133.8	27.5	21.5
55°	536.4	333.3	88.4	20.3	16.7
57.5°	489.8	280.8	47.8	15.5	11.9
60°	444.4	229.4	23.9	11.9	8.4
62.5°	397.8	180.4	19.1	7.2	4.8
65°	351.3	135.0	13.1	4.8	3.6
67.5°	304.7	92.0	8.4	2.4	1.2
70°	256.9	56.2	4.8	1.2	1.2
72.5°	211.5	28.7	2.4	1.2	1.2
75°	167.3	17.9	1.2	1.2	0.0
77.5°	124.3	9.6	1.2	1.2	0.0
80°	84.8	3.6	0.0	0.0	0.0
82.5°	49.0	1.2	0.0	0.0	0.0
85°	17.9	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	18.71	20.04	19.08	20.36	20.67	0.00	0.00	0.00	0.00	0.00
	3H	20.26	21.43	20.64	21.76	22.13	0.00	0.00	0.00	0.00	0.00
	4H	20.85	21.95	21.25	22.30	22.68	0.00	0.00	0.00	0.00	0.00
	6H	21.27	22.27	21.68	22.64	23.04	0.00	0.00	0.00	0.00	0.00
	8H	21.37	22.32	21.80	22.71	23.12	0.00	0.00	0.00	0.00	0.00
	12H	21.39	22.30	21.82	22.68	23.11	0.00	0.00	0.00	0.00	0.00
4H	2H	18.49	19.59	18.89	19.94	20.32	0.00	0.00	0.00	0.00	0.18
	3H	20.06	20.95	20.47	21.35	21.76	0.00	0.00	0.00	0.00	0.01
	4H	20.64	21.44	21.07	21.86	22.30	0.00	0.00	0.00	0.00	0.00
	6H	21.10	21.79	21.56	22.23	22.70	0.00	0.00	0.00	0.00	0.00
	8H	21.22	21.86	21.69	22.31	22.78	0.00	0.00	0.00	0.00	0.00
	12H	21.26	21.83	21.75	22.31	22.78	0.00	0.00	0.00	0.00	0.00
8H	4H	20.50	21.14	20.97	21.59	22.06	0.00	0.64	0.47	1.09	1.56
	6H	20.94	21.47	21.45	21.96	22.44	0.00	0.43	0.42	0.93	1.41
	8H	21.06	21.53	21.58	22.04	22.54	0.00	0.32	0.37	0.83	1.33
	12H	21.11	21.52	21.63	22.02	22.59	0.00	0.22	0.32	0.72	1.29
12H	4H	20.46	21.02	20.94	21.51	21.98	0.42	0.98	0.90	1.47	1.94
	6H	20.88	21.35	21.40	21.87	22.36	0.31	0.78	0.83	1.29	1.79
	8H	21.02	21.43	21.53	21.92	22.50	0.27	0.68	0.78	1.17	1.75