

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: P1056156

Luminaire Tested: S124R3DR-H350D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056156
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H350D927-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

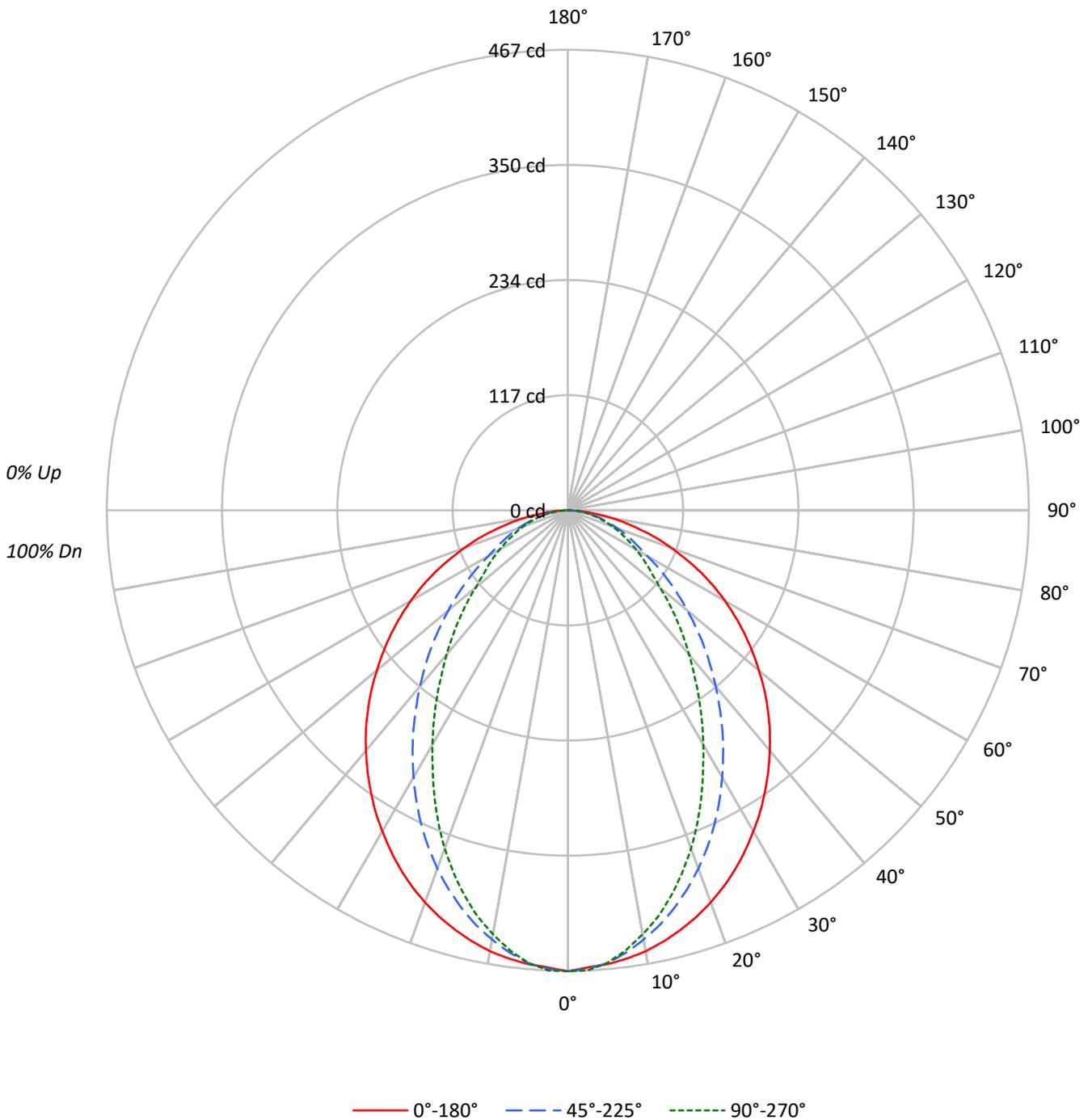
Lumens per Lamp: N/A
Luminaire Lumens: 931.0 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63				63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55				55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49				49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43				43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39				39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35				35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32				32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29				29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4132	4132	4132
5°	4099	4091	4088
10°	4076	3968	3919
15°	4033	3819	3702
20°	3981	3637	3433
25°	3916	3429	3121
30°	3838	3192	2802
35°	3757	2944	2494
40°	3673	2688	2207
45°	3582	2438	1939
50°	3473	2176	1675
55°	3367	1914	1521
60°	3248	1643	1411
65°	3100	1490	1316
70°	2880	1378	1246
75°	2610	1267	1175
80°	2276	1171	1105
85°	1745	1085	1014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3582 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	4.7
10°-20°	118.0	12.7
20°-30°	163.5	17.6
30°-40°	175.4	18.8
40°-50°	159.5	17.1
50°-60°	125.6	13.5
60°-70°	86.0	9.2
70°-80°	46.3	5.0
80°-90°	13.1	1.4
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°	325.0	34.9
0°-40°	500.5	53.8
0°-60°	785.6	84.4
0°-90°	931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	462	467	461	458	461	44
15°	441	436	417	406	404	124
25°	401	385	352	326	320	185
35°	348	321	273	240	231	218
45°	286	250	195	161	155	221
55°	218	177	124	100	99	195
65°	148	106	71	63	63	146
75°	76	46	37	34	34	82
85°	17	12	11	10	10	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	467.4	467.4	467.4	467.4	467.4
2.5°	464.0	469.5	465.4	466.1	466.8
5°	461.9	467.1	460.9	458.5	460.6
7.5°	458.5	461.9	452.3	447.8	449.9
10°	454.0	454.7	442.0	435.5	436.5
12.5°	447.8	446.1	430.6	421.4	422.0
15°	440.6	435.8	417.2	405.9	404.5
17.5°	432.4	424.4	402.4	388.0	385.2
20°	423.1	412.4	386.6	368.0	364.9
22.5°	412.8	399.0	369.4	347.4	342.9
25°	401.4	384.9	351.5	326.1	319.9
27.5°	389.0	369.8	332.3	304.4	296.5
30°	375.9	353.9	312.7	282.7	274.5
32.5°	362.5	337.8	292.7	261.1	252.5
35°	348.1	320.9	272.8	239.7	231.1
37.5°	333.3	303.4	252.5	219.1	210.2
40°	318.2	285.8	232.9	198.5	191.2
42.5°	302.7	267.9	213.6	179.2	172.7
45°	286.5	250.1	195.0	161.3	155.1
47.5°	270.0	231.8	176.1	144.5	138.6
50°	252.5	213.6	158.2	128.0	121.8
52.5°	235.6	195.0	141.0	111.8	108.7
55°	218.4	176.8	124.2	100.1	98.7
57.5°	201.2	158.6	108.7	90.8	89.4
60°	183.7	140.7	92.9	81.2	79.8
62.5°	166.1	123.1	81.2	71.9	71.2
65°	148.2	105.9	71.2	63.3	62.9
67.5°	129.3	89.4	62.3	55.7	55.4
70°	111.4	72.9	53.3	48.2	48.2
72.5°	94.6	57.8	45.1	40.9	40.9
75°	76.4	46.4	37.1	34.1	34.4
77.5°	60.2	36.5	29.9	27.9	27.9
80°	44.7	27.2	23.0	21.3	21.7
82.5°	30.3	18.9	16.5	15.5	15.5
85°	17.2	11.7	10.7	10.0	10.0
87.5°	6.2	5.5	5.2	4.5	4.8
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	16.07	17.60	16.44	17.91	18.23	11.85	13.37	12.21	13.69	14.00
	3H	17.85	19.22	18.22	19.54	19.91	13.46	14.83	13.84	15.16	15.52
	4H	18.52	19.80	18.92	20.15	20.53	14.09	15.38	14.49	15.73	16.11
	6H	19.03	20.22	19.44	20.58	20.97	14.59	15.78	15.00	16.15	16.54
	8H	19.19	20.32	19.62	20.71	21.11	14.76	15.90	15.19	16.29	16.69
	12H	19.29	20.37	19.72	20.76	21.19	14.89	15.97	15.32	16.35	16.78
4H	2H	16.17	17.45	16.57	17.80	18.18	12.57	13.85	12.97	14.20	14.58
	3H	18.11	19.18	18.52	19.58	19.98	14.38	15.45	14.79	15.85	16.25
	4H	18.87	19.83	19.30	20.25	20.68	15.11	16.08	15.55	16.49	16.93
	6H	19.50	20.34	19.96	20.78	21.24	15.73	16.57	16.19	17.01	17.47
	8H	19.72	20.51	20.19	20.95	21.42	15.95	16.73	16.41	17.18	17.64
	12H	19.88	20.58	20.36	21.06	21.53	16.11	16.82	16.60	17.29	17.77
8H	4H	18.92	19.71	19.39	20.15	20.62	15.50	16.29	15.96	16.73	17.20
	6H	19.62	20.27	20.12	20.76	21.24	16.23	16.88	16.73	17.37	17.85
	8H	19.89	20.47	20.41	20.98	21.47	16.52	17.11	17.04	17.61	18.10
	12H	20.11	20.62	20.62	21.12	21.68	16.77	17.28	17.28	17.78	18.34
12H	4H	18.92	19.62	19.40	20.10	20.57	15.56	16.26	16.04	16.74	17.21
	6H	19.62	20.20	20.13	20.71	21.20	16.32	16.90	16.83	17.41	17.90
	8H	19.93	20.44	20.43	20.93	21.50	16.67	17.18	17.18	17.67	18.24