

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: P1055565

Luminaire Tested: S123R3DR-S1000D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055565
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D930-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

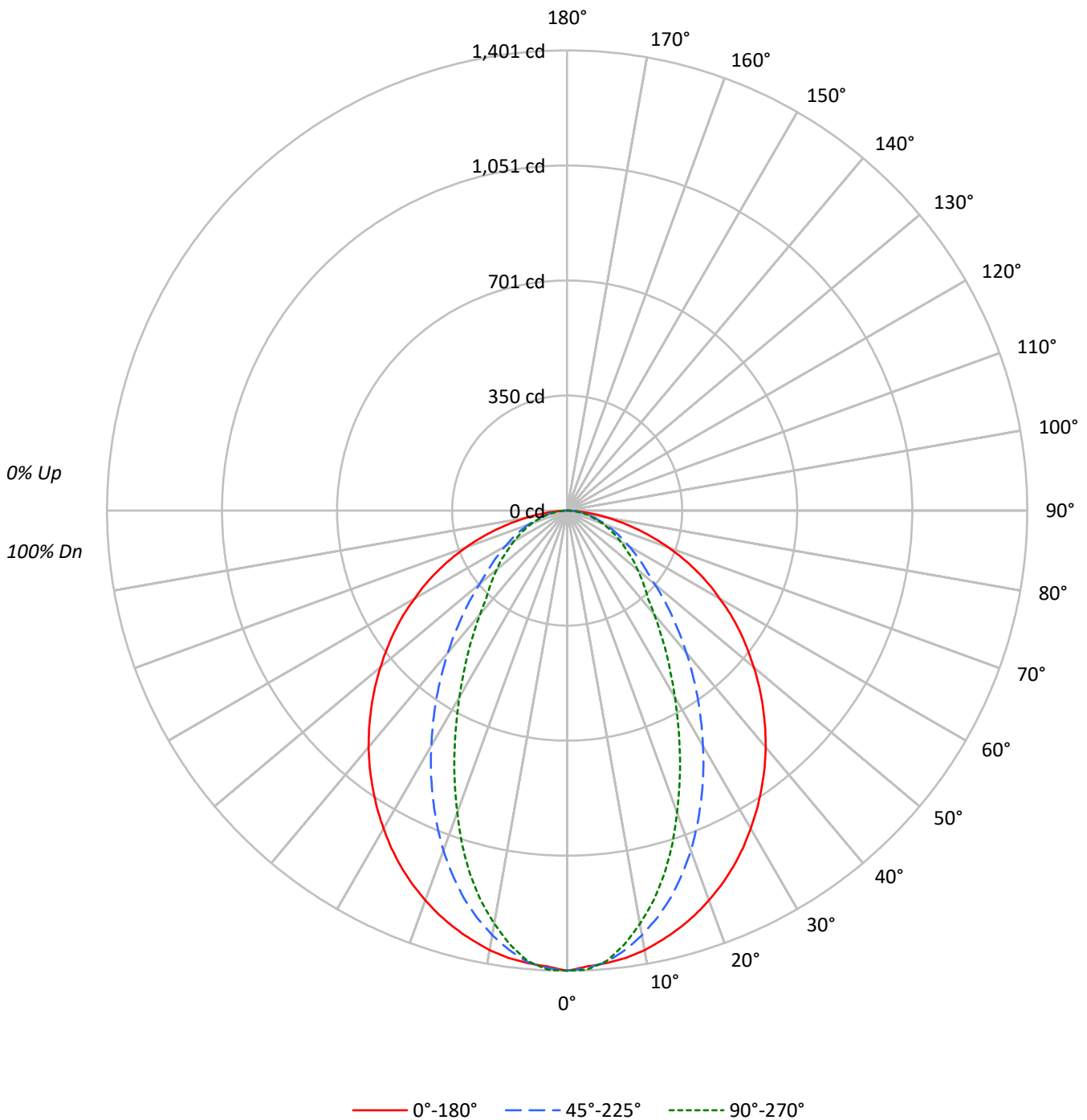
Lumens per Lamp: N/A
Luminaire Lumens: 2456.7 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (A_{in}): 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	107	104	100	97	99	97	94	96	93	91	92	90	88					86				
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76					74				
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67					65				
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59					57				
5	80	68	60	54	78	67	60	54	65	58	53	63	57	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	39					37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35					34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33					31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16889	16889	16889
5°	16738	16699	16661
10°	16636	16072	15636
15°	16438	15221	14280
20°	16198	14127	12556
25°	15917	12864	10802
30°	15563	11508	9131
35°	15189	10178	7711
40°	14807	8888	6481
45°	14363	7664	5717
50°	13914	6523	5246
55°	13499	5814	4845
60°	12934	5254	4521
65°	12404	4813	4245
70°	11559	4431	3990
75°	10346	4099	3759
80°	8873	3784	3492
85°	6239	3472	3334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14363 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.9	5.3
10°-20°	343.5	14.0
20°-30°	452.6	18.4
30°-40°	459.3	18.7
40°-50°	399.3	16.3
50°-60°	312.8	12.7
60°-70°	212.5	8.7
70°-80°	115.2	4.7
80°-90°	31.7	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°	925.9	37.7
0°-40°	1385.3	56.4
0°-60°	2097.3	85.4
0°-90°	2456.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2456.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1401	1401	1401	1401	1401	
5°	1383	1400	1380	1367	1377	131
15°	1317	1298	1220	1160	1144	371
25°	1196	1124	967	846	812	551
35°	1032	909	692	560	524	646
45°	842	676	450	347	335	650
55°	642	446	277	236	230	573
65°	435	241	169	151	149	429
75°	222	111	88	82	81	237
85°	45	27	25	23	24	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1400.8	1400.8	1400.8	1400.8	1400.8
2.5°	1389.3	1407.1	1393.5	1394.5	1398.7
5°	1383.0	1399.7	1379.8	1367.3	1376.7
7.5°	1373.5	1386.1	1349.5	1329.5	1332.7
10°	1358.9	1363.1	1312.8	1281.3	1277.2
12.5°	1339.0	1331.6	1268.8	1222.7	1215.3
15°	1317.0	1298.1	1219.5	1159.8	1144.1
17.5°	1291.8	1260.4	1161.9	1088.6	1064.5
20°	1262.5	1218.5	1101.1	1007.9	978.6
22.5°	1231.1	1174.5	1035.1	925.1	894.7
25°	1196.5	1124.2	967.0	846.5	812.0
27.5°	1158.8	1073.9	897.9	769.0	730.3
30°	1117.9	1021.5	826.6	693.6	655.9
32.5°	1076.0	966.0	758.5	623.4	586.7
35°	1032.0	909.4	691.5	559.5	523.9
37.5°	986.9	851.8	626.5	498.7	465.2
40°	940.8	793.1	564.7	442.1	411.8
42.5°	891.6	734.4	505.0	388.7	365.7
45°	842.4	675.8	449.5	346.8	335.3
47.5°	793.1	616.1	397.1	317.5	307.0
50°	741.8	558.4	347.8	290.2	279.7
52.5°	691.5	501.9	307.0	264.0	256.7
55°	642.2	446.3	276.6	235.7	230.5
57.5°	590.9	391.8	246.2	213.7	207.4
60°	536.4	339.5	217.9	190.7	187.5
62.5°	487.2	290.2	192.8	170.8	167.6
65°	434.8	241.0	168.7	150.9	148.8
67.5°	381.4	200.1	146.7	132.0	131.0
70°	327.9	168.7	125.7	114.2	113.2
72.5°	275.5	139.3	105.8	98.5	96.4
75°	222.1	111.1	88.0	81.7	80.7
77.5°	173.9	85.9	70.2	66.0	65.0
80°	127.8	63.9	54.5	51.3	50.3
82.5°	83.8	44.0	38.8	36.7	36.7
85°	45.1	27.2	25.1	23.0	24.1
87.5°	15.7	11.5	11.5	10.5	11.5
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	20.38	21.87	20.74	22.18	22.50	15.53	17.02	15.89	17.33	17.65
	3H	22.27	23.60	22.64	23.93	24.29	17.16	18.49	17.53	18.82	19.18
	4H	23.02	24.28	23.42	24.63	25.01	17.79	19.05	18.19	19.40	19.78
	6H	23.59	24.75	24.00	25.11	25.50	18.28	19.44	18.69	19.81	20.20
	8H	23.76	24.86	24.19	25.25	25.65	18.45	19.56	18.88	19.95	20.35
	12H	23.86	24.91	24.29	25.29	25.72	18.58	19.63	19.01	20.02	20.45
4H	2H	20.42	21.68	20.82	22.03	22.41	16.26	17.51	16.66	17.86	18.24
	3H	22.44	23.49	22.85	23.89	24.29	18.08	19.12	18.49	19.52	19.92
	4H	23.26	24.20	23.69	24.61	25.05	18.82	19.76	19.26	20.18	20.62
	6H	23.94	24.76	24.40	25.20	25.66	19.43	20.25	19.89	20.69	21.15
	8H	24.17	24.94	24.64	25.38	25.85	19.65	20.41	20.11	20.86	21.32
	12H	24.32	25.01	24.81	25.48	25.96	19.82	20.50	20.30	20.98	21.45
8H	4H	23.28	24.05	23.75	24.49	24.96	19.21	19.97	19.67	20.41	20.88
	6H	24.01	24.64	24.51	25.13	25.61	19.94	20.57	20.43	21.06	21.54
	8H	24.28	24.85	24.80	25.36	25.85	20.22	20.79	20.74	21.30	21.79
	12H	24.49	24.99	25.00	25.48	26.05	20.47	20.97	20.98	21.46	22.03
12H	4H	23.27	23.95	23.75	24.43	24.90	19.26	19.94	19.74	20.42	20.89
	6H	24.00	24.56	24.51	25.07	25.56	20.02	20.58	20.53	21.09	21.58
	8H	24.30	24.80	24.81	25.29	25.86	20.37	20.86	20.88	21.36	21.92