

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: P1055593

Luminaire Tested: S123R3DR-S1165D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055593
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1165D935-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

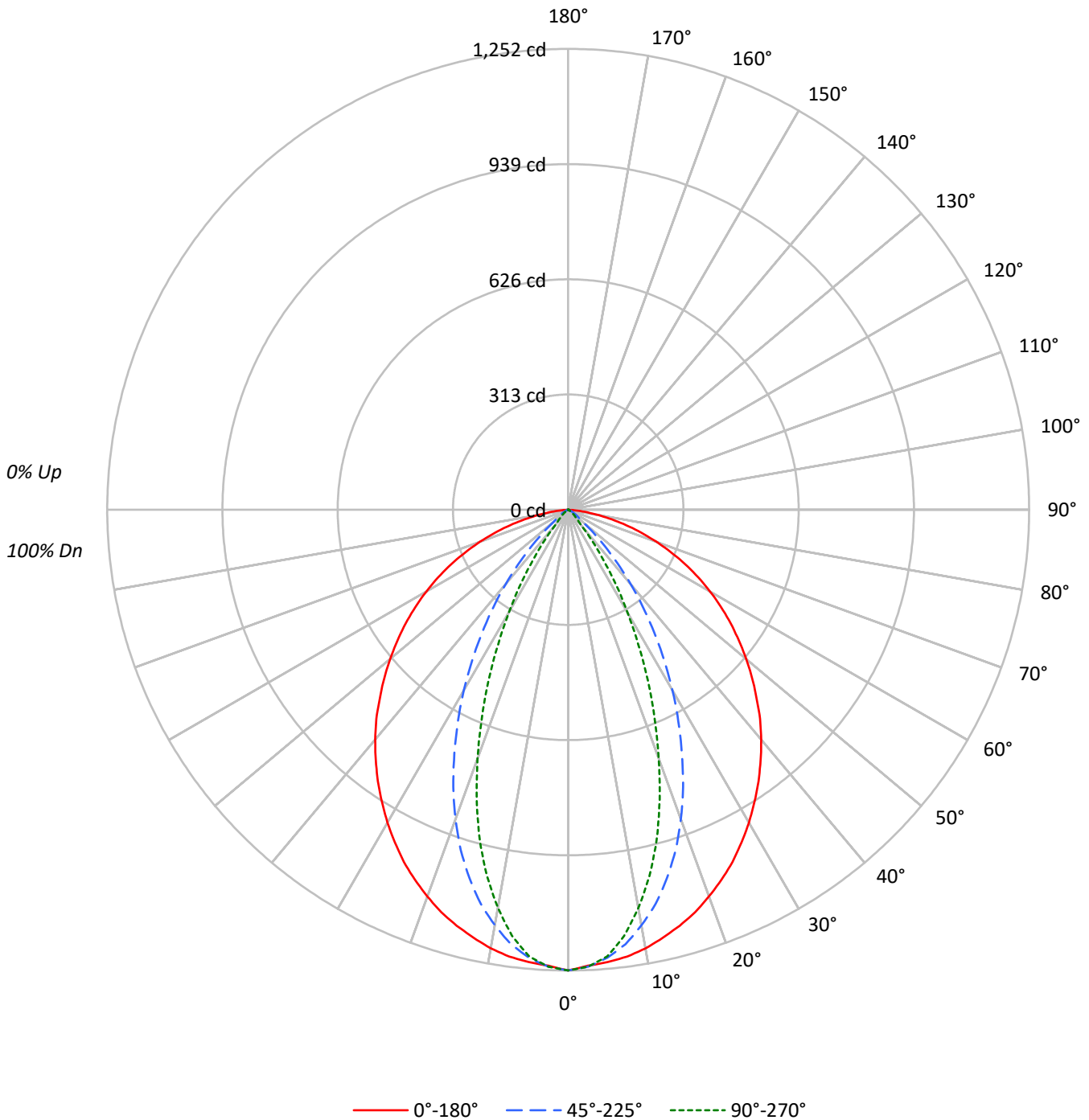
Lumens per Lamp: N/A
Luminaire Lumens: 1465.1 lumens
Efficiency: N/A
Efficacy: 35.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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

TEST NUMBER: P1055593

CATALOG NUMBER: S123R3DR-S1165D935-X4F0-XX-UDD-F-B

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	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15092	15092	15092
5°	14930	14788	14741
10°	14816	14037	13448
15°	14604	12934	11588
20°	14344	11479	9230
25°	14044	9726	6806
30°	13667	7882	4465
35°	13264	6001	2446
40°	12835	4149	837
45°	12333	2413	488
50°	11837	949	293
55°	11328	601	137
60°	10740	376	63
65°	10002	185	37
70°	8971	92	46
75°	7621	61	61
80°	5679	90	0
85°	2158	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12333 cd/sqm

TEST NUMBER: P1055593

CATALOG NUMBER: S123R3DR-S1165D935-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	7.8
10°-20°	291.3	19.9
20°-30°	347.4	23.7
30°-40°	294.7	20.1
40°-50°	200.3	13.7
50°-60°	124.1	8.5
60°-70°	62.9	4.3
70°-80°	25.7	1.8
80°-90°	3.9	0.3
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°	753.4	51.4
0°-40°	1048.1	71.5
0°-60°	1372.6	93.7
0°-90°	1465.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1465.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1252	1252	1252	1252	1252	
5°	1234	1245	1222	1213	1218	117
15°	1170	1140	1036	954	928	330
25°	1056	957	731	565	512	486
35°	901	723	408	219	166	563
45°	723	474	142	35	29	559
55°	539	239	29	10	6	481
65°	351	58	6	1	1	346
75°	164	10	1	1	1	174
85°	16	0	0	1	0	28
90°	0	0	0	0	0	



TEST NUMBER: P1055593

CATALOG NUMBER: S123R3DR-S1165D935-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1251.8	1251.8	1251.8	1251.8	1251.8
2.5°	1240.1	1257.0	1242.7	1241.4	1242.7
5°	1233.6	1245.3	1221.9	1212.8	1218.0
7.5°	1224.5	1229.7	1190.7	1167.4	1167.4
10°	1210.2	1206.3	1146.6	1107.6	1098.5
12.5°	1190.7	1175.2	1097.2	1036.2	1019.3
15°	1170.0	1140.1	1036.2	954.4	928.4
17.5°	1146.6	1101.1	970.0	863.5	825.9
20°	1118.0	1057.0	894.7	764.8	719.4
22.5°	1088.2	1008.9	815.5	663.5	612.9
25°	1055.7	957.0	731.1	564.9	511.6
27.5°	1019.3	902.5	648.0	470.1	411.6
30°	981.7	845.3	566.2	379.2	320.7
32.5°	941.4	785.6	484.3	296.1	241.5
35°	901.2	723.3	407.7	219.4	166.2
37.5°	858.3	660.9	333.7	151.9	105.2
40°	815.5	599.9	263.6	96.1	53.2
42.5°	771.3	536.3	200.0	48.0	36.4
45°	723.3	474.0	141.5	35.1	28.6
47.5°	677.8	414.2	93.5	28.6	22.1
50°	631.1	354.5	50.6	20.8	15.6
52.5°	584.3	297.4	36.4	15.6	10.4
55°	538.9	238.9	28.6	10.4	6.5
57.5°	492.1	188.3	22.1	6.5	3.9
60°	445.4	138.9	15.6	3.9	2.6
62.5°	398.6	96.1	10.4	2.6	1.3
65°	350.6	58.4	6.5	1.3	1.3
67.5°	301.3	40.3	3.9	1.3	1.3
70°	254.5	28.6	2.6	1.3	1.3
72.5°	207.8	18.2	1.3	1.3	0.0
75°	163.6	10.4	1.3	1.3	1.3
77.5°	120.8	3.9	1.3	1.3	0.0
80°	81.8	1.3	1.3	1.3	0.0
82.5°	45.4	0.0	1.3	1.3	0.0
85°	15.6	0.0	0.0	1.3	0.0
87.5°	0.0	0.0	0.0	1.3	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055593
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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	18.48	19.76	18.84	20.07	20.39	0.00	0.00	0.00	0.00	0.00
	3H	20.42	21.56	20.80	21.89	22.25	0.00	0.00	0.00	0.00	0.00
	4H	21.25	22.31	21.65	22.66	23.04	0.00	0.00	0.00	0.00	0.00
	6H	21.80	22.77	22.22	23.14	23.54	0.00	0.00	0.00	0.00	0.00
	8H	21.93	22.85	22.36	23.24	23.64	0.00	0.00	0.00	0.00	0.00
	12H	21.95	22.83	22.39	23.21	23.64	0.00	0.00	0.00	0.00	0.00
4H	2H	18.24	19.30	18.64	19.65	20.03	0.00	0.00	0.00	0.00	0.00
	3H	20.19	21.06	20.61	21.46	21.87	0.00	0.00	0.00	0.00	0.00
	4H	21.01	21.78	21.44	22.20	22.64	0.00	0.00	0.00	0.00	0.00
	6H	21.61	22.27	22.07	22.72	23.19	0.00	0.00	0.00	0.00	0.00
	8H	21.76	22.38	22.23	22.83	23.30	0.00	0.00	0.00	0.00	0.00
	12H	21.81	22.35	22.30	22.84	23.31	0.00	0.00	0.00	0.00	0.00
8H	4H	20.87	21.48	21.34	21.93	22.40	0.00	0.00	0.00	0.00	0.00
	6H	21.45	21.95	21.95	22.45	22.93	0.00	0.00	0.00	0.00	0.00
	8H	21.60	22.05	22.12	22.56	23.06	0.00	0.00	0.00	0.00	0.00
	12H	21.65	22.05	22.17	22.55	23.12	0.00	0.00	0.00	0.00	0.00
12H	4H	20.82	21.36	21.30	21.85	22.32	0.00	0.00	0.00	0.00	0.00
	6H	21.38	21.83	21.91	22.35	22.84	0.00	0.00	0.00	0.00	0.00
	8H	21.55	21.95	22.07	22.44	23.02	0.00	0.00	0.00	0.00	0.00