

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: P1055595

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055595
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-S1165D935-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

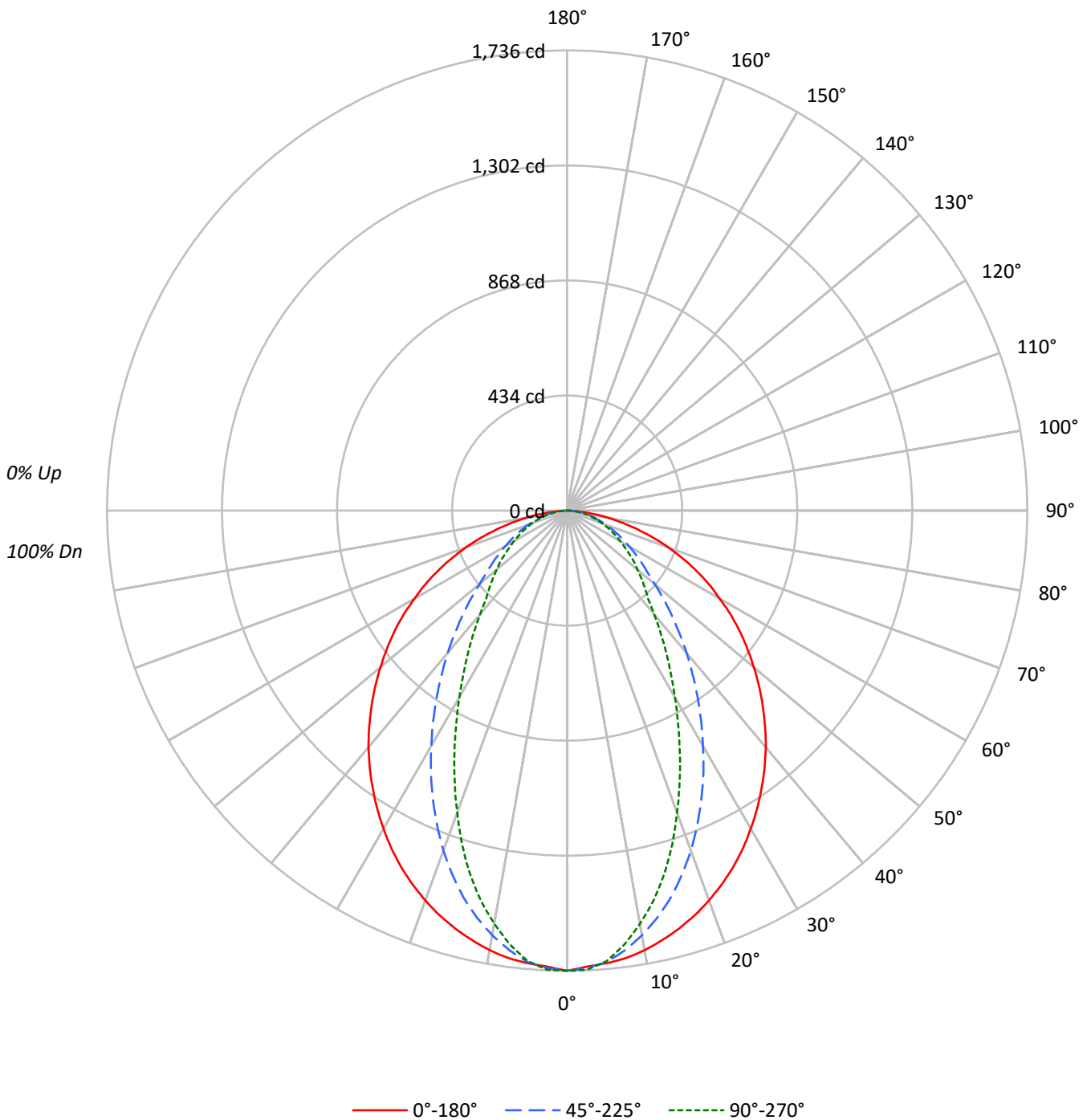
Lumens per Lamp: N/A
Luminaire Lumens: 3044.9 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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

TEST NUMBER: P1055595

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

Luminous Intensity Polar Plot





TEST NUMBER: P1055595

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

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					86			
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74					74			
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57			
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50					50			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40					40			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20931	20931	20931
5°	20744	20696	20649
10°	20619	19918	19378
15°	20373	18866	17699
20°	20075	17509	15560
25°	19727	15943	13387
30°	19288	14263	11317
35°	18825	12613	9556
40°	18353	11015	8031
45°	17801	9499	7084
50°	17243	8086	6503
55°	16732	7206	6005
60°	16030	6513	5604
65°	15374	5965	5261
70°	14326	5492	4942
75°	12824	5082	4658
80°	10998	4687	4325
85°	7719	4316	4136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17801 cd/sqm



TEST NUMBER: P1055595

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.9	5.3
10°-20°	425.8	14.0
20°-30°	560.9	18.4
30°-40°	569.3	18.7
40°-50°	494.8	16.3
50°-60°	387.7	12.7
60°-70°	263.4	8.7
70°-80°	142.7	4.7
80°-90°	39.3	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°	1147.6	37.7
0°-40°	1716.9	56.4
0°-60°	2599.4	85.4
0°-90°	3044.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3044.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1736	1736	1736	1736	1736	
5°	1714	1735	1710	1695	1706	163
15°	1632	1609	1512	1438	1418	460
25°	1483	1393	1198	1049	1006	683
35°	1279	1127	857	693	649	800
45°	1044	838	557	430	416	806
55°	796	553	343	292	286	711
65°	539	299	209	187	184	532
75°	275	138	109	101	100	294
85°	56	34	31	29	30	70
90°	0	0	0	0	0	



TEST NUMBER: P1055595

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1736.1	1736.1	1736.1	1736.1	1736.1
2.5°	1721.8	1743.9	1727.0	1728.3	1733.5
5°	1714.0	1734.8	1710.1	1694.6	1706.2
7.5°	1702.4	1717.9	1672.5	1647.8	1651.7
10°	1684.2	1689.4	1627.0	1588.1	1582.9
12.5°	1659.5	1650.4	1572.5	1515.4	1506.3
15°	1632.2	1608.9	1511.5	1437.5	1418.0
17.5°	1601.1	1562.1	1440.1	1349.2	1319.3
20°	1564.7	1510.2	1364.7	1249.2	1212.8
22.5°	1525.8	1455.6	1282.9	1146.6	1108.9
25°	1482.9	1393.3	1198.5	1049.2	1006.3
27.5°	1436.2	1331.0	1112.8	953.1	905.1
30°	1385.5	1266.1	1024.5	859.6	812.9
32.5°	1333.6	1197.2	940.1	772.6	727.2
35°	1279.0	1127.1	857.0	693.4	649.3
37.5°	1223.2	1055.7	776.5	618.1	576.5
40°	1166.1	983.0	699.9	548.0	510.3
42.5°	1105.0	910.3	625.9	481.7	453.2
45°	1044.0	837.5	557.1	429.8	415.5
47.5°	983.0	763.5	492.1	393.5	380.5
50°	919.3	692.1	431.1	359.7	346.7
52.5°	857.0	622.0	380.5	327.2	318.1
55°	796.0	553.2	342.8	292.2	285.7
57.5°	732.4	485.6	305.2	264.9	257.1
60°	664.8	420.7	270.1	236.3	232.4
62.5°	603.8	359.7	238.9	211.7	207.8
65°	538.9	298.7	209.1	187.0	184.4
67.5°	472.7	248.0	181.8	163.6	162.3
70°	406.4	209.1	155.8	141.5	140.2
72.5°	341.5	172.7	131.2	122.1	119.5
75°	275.3	137.6	109.1	101.3	100.0
77.5°	215.6	106.5	87.0	81.8	80.5
80°	158.4	79.2	67.5	63.6	62.3
82.5°	103.9	54.5	48.0	45.4	45.4
85°	55.8	33.8	31.2	28.6	29.9
87.5°	19.5	14.3	14.3	13.0	14.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055595
 CATALOG NUMBER: S123R3DR-S1165D935-X4F0-XX-UDD-F-W

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	21.12	22.62	21.49	22.93	23.24	16.27	17.77	16.64	18.08	18.39
	3H	23.01	24.35	23.39	24.68	25.04	17.90	19.24	18.28	19.57	19.93
	4H	23.77	25.02	24.17	25.37	25.75	18.54	19.79	18.94	20.14	20.52
	6H	24.33	25.49	24.74	25.86	26.25	19.03	20.19	19.44	20.55	20.95
	8H	24.50	25.61	24.93	26.00	26.40	19.20	20.30	19.62	20.69	21.09
	12H	24.60	25.66	25.03	26.04	26.47	19.32	20.38	19.75	20.76	21.19
4H	2H	21.17	22.43	21.57	22.78	23.15	17.00	18.26	17.40	18.61	18.99
	3H	23.19	24.23	23.60	24.63	25.03	18.82	19.87	19.23	20.27	20.67
	4H	24.00	24.94	24.44	25.36	25.80	19.57	20.51	20.00	20.92	21.36
	6H	24.69	25.51	25.15	25.95	26.41	20.18	21.00	20.64	21.44	21.90
	8H	24.92	25.68	25.38	26.13	26.59	20.39	21.16	20.86	21.60	22.07
	12H	25.07	25.75	25.55	26.23	26.70	20.56	21.24	21.04	21.72	22.19
8H	4H	24.03	24.79	24.49	25.24	25.71	19.95	20.72	20.42	21.16	21.63
	6H	24.76	25.39	25.26	25.88	26.36	20.68	21.31	21.18	21.80	22.28
	8H	25.03	25.59	25.54	26.10	26.59	20.97	21.53	21.48	22.04	22.53
	12H	25.24	25.74	25.75	26.23	26.79	21.21	21.71	21.72	22.20	22.77
12H	4H	24.01	24.70	24.50	25.18	25.65	20.01	20.69	20.49	21.17	21.64
	6H	24.74	25.31	25.26	25.82	26.31	20.76	21.33	21.28	21.84	22.33
	8H	25.05	25.55	25.56	26.04	26.61	21.11	21.61	21.62	22.10	22.67