

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: P1055576

Luminaire Tested: S123R3DR-S1165D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055576
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1165D830-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

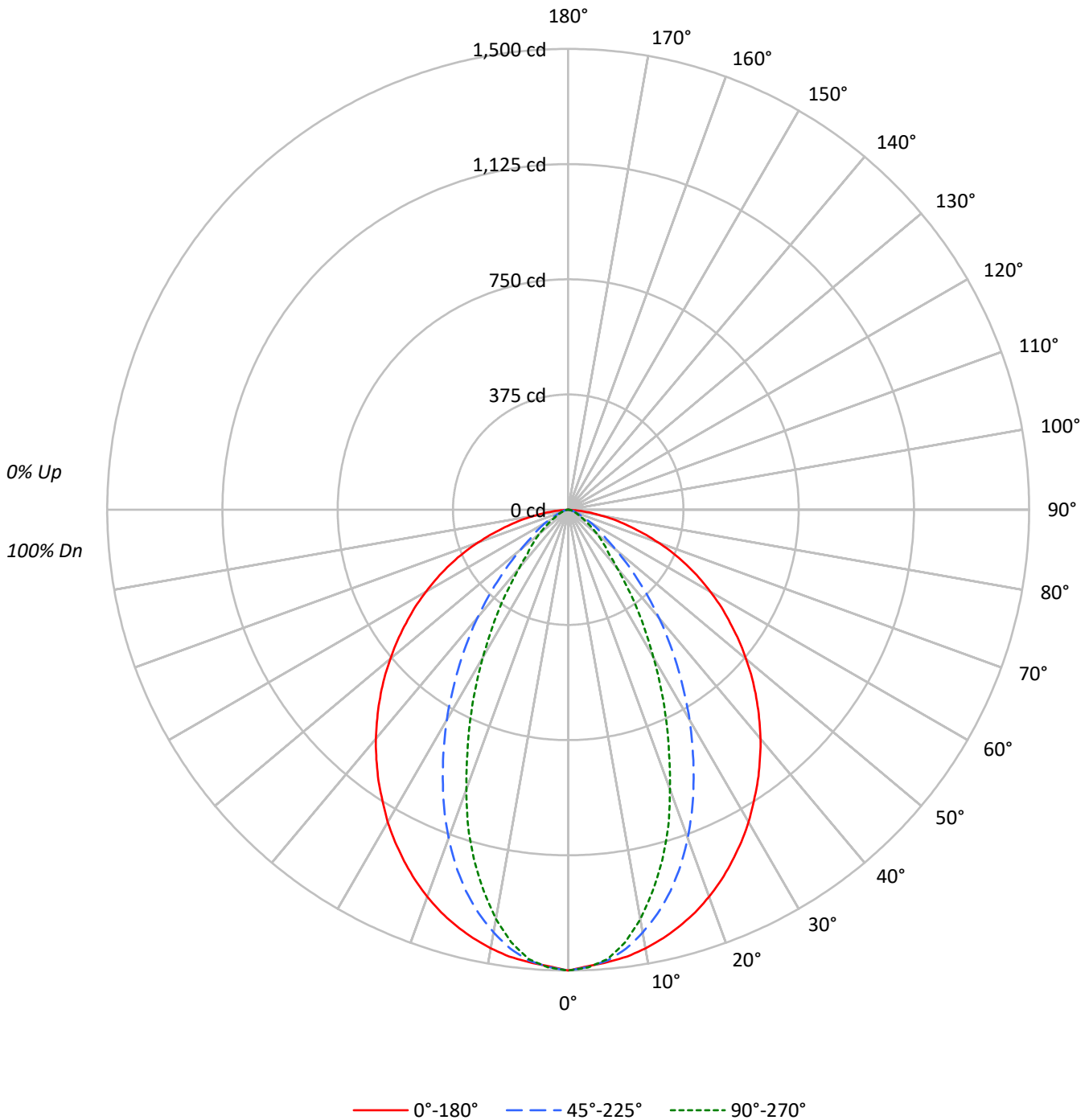
Lumens per Lamp: N/A
Luminaire Lumens: 2085.6 lumens
Efficiency: N/A
Efficacy: 49.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18081	18081	18081
5°	17892	17823	17771
10°	17750	17106	16568
15°	17512	16039	14745
20°	17199	14590	12420
25°	16792	12840	10022
30°	16347	11004	7718
35°	15838	9080	5712
40°	15325	7226	3892
45°	14760	5405	2933
50°	14157	3759	2292
55°	13535	2749	1673
60°	12888	2057	1201
65°	12124	1378	933
70°	10974	1001	751
75°	9470	727	596
80°	7603	590	493
85°	3929	595	387

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14760 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.6	6.6
10°-20°	360.9	17.3
20°-30°	453.4	21.7
30°-40°	422.3	20.2
40°-50°	323.2	15.5
50°-60°	214.9	10.3
60°-70°	115.8	5.6
70°-80°	47.4	2.3
80°-90°	9.1	0.4
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°	952.9	45.7
0°-40°	1375.1	65.9
0°-60°	1913.2	91.7
0°-90°	2085.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2085.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1500	1500	1500	1500	1500	
5°	1478	1494	1473	1467	1468	140
15°	1403	1380	1285	1210	1181	395
25°	1262	1177	965	805	753	581
35°	1076	917	617	436	388	673
45°	866	640	317	186	172	668
55°	644	372	131	91	80	577
65°	425	144	48	36	33	420
75°	203	34	16	14	13	218
85°	28	4	4	4	3	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1499.7	1499.7	1499.7	1499.7	1499.7
2.5°	1486.9	1505.4	1489.7	1491.1	1491.1
5°	1478.4	1494.0	1472.7	1467.0	1468.4
7.5°	1467.0	1476.9	1441.4	1422.9	1420.1
10°	1449.9	1452.8	1397.3	1364.6	1353.3
12.5°	1428.6	1418.7	1346.2	1292.1	1270.8
15°	1403.0	1380.3	1285.0	1209.7	1181.3
17.5°	1374.6	1336.2	1215.4	1117.3	1083.2
20°	1340.5	1286.5	1137.2	1014.9	968.0
22.5°	1303.5	1233.9	1054.7	909.8	857.2
25°	1262.3	1177.0	965.2	804.6	753.4
27.5°	1219.6	1115.9	877.1	705.1	652.5
30°	1174.2	1053.3	790.4	608.4	554.4
32.5°	1124.4	985.1	700.8	518.8	464.8
35°	1076.1	916.9	616.9	436.4	388.1
37.5°	1024.9	848.6	535.9	363.9	309.9
40°	973.7	779.0	459.1	292.8	247.3
42.5°	919.7	709.3	386.6	233.1	197.6
45°	865.7	639.7	317.0	186.2	172.0
47.5°	811.7	570.0	255.9	160.6	146.4
50°	754.8	503.2	200.4	136.5	122.2
52.5°	700.8	436.4	156.4	112.3	99.5
55°	643.9	372.4	130.8	91.0	79.6
57.5°	591.3	307.0	108.0	71.1	62.5
60°	534.5	248.8	85.3	55.4	49.8
62.5°	480.5	194.7	65.4	44.1	39.8
65°	425.0	143.6	48.3	35.5	32.7
67.5°	369.6	103.8	37.0	28.4	27.0
70°	311.3	78.2	28.4	22.7	21.3
72.5°	255.9	55.4	21.3	18.5	17.1
75°	203.3	34.1	15.6	14.2	12.8
77.5°	156.4	19.9	11.4	11.4	10.0
80°	109.5	11.4	8.5	8.5	7.1
82.5°	66.8	7.1	5.7	5.7	5.7
85°	28.4	4.3	4.3	4.3	2.8
87.5°	4.3	1.4	1.4	1.4	1.4
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	19.87	21.23	20.23	21.54	21.85	8.44	9.80	8.81	10.11	10.43
	3H	21.62	22.83	22.00	23.16	23.52	9.11	10.31	9.49	10.64	11.01
	4H	22.32	23.45	22.73	23.80	24.18	9.30	10.43	9.71	10.78	11.16
	6H	22.84	23.87	23.25	24.24	24.63	9.43	10.46	9.84	10.83	11.22
	8H	22.98	23.96	23.41	24.35	24.75	9.46	10.44	9.89	10.83	11.23
	12H	23.03	23.96	23.46	24.35	24.78	9.47	10.41	9.90	10.79	11.22
4H	2H	19.68	20.80	20.08	21.15	21.53	9.00	10.12	9.40	10.47	10.86
	3H	21.47	22.39	21.88	22.79	23.20	9.80	10.72	10.21	11.12	11.52
	4H	22.17	22.99	22.60	23.41	23.85	10.06	10.88	10.49	11.30	11.74
	6H	22.74	23.45	23.20	23.89	24.36	10.25	10.96	10.72	11.41	11.88
	8H	22.91	23.57	23.38	24.02	24.49	10.31	10.97	10.78	11.42	11.89
	12H	23.00	23.58	23.48	24.07	24.54	10.34	10.93	10.83	11.41	11.88
8H	4H	22.04	22.71	22.51	23.15	23.62	10.37	11.03	10.84	11.48	11.95
	6H	22.60	23.14	23.10	23.63	24.12	10.62	11.16	11.12	11.66	12.14
	8H	22.77	23.26	23.29	23.77	24.26	10.71	11.19	11.23	11.71	12.20
	12H	22.88	23.31	23.39	23.80	24.37	10.79	11.21	11.30	11.71	12.28
12H	4H	22.00	22.59	22.49	23.07	23.54	10.41	11.00	10.90	11.48	11.96
	6H	22.54	23.02	23.06	23.54	24.03	10.66	11.15	11.18	11.66	12.16
	8H	22.73	23.16	23.25	23.66	24.23	10.79	11.22	11.31	11.71	12.28