

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: P1055553

Luminaire Tested: S123R3DR-S1000D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055553
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-S1000D835-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, 80 CRI LEDS
Ballast/Driver: -

Summary

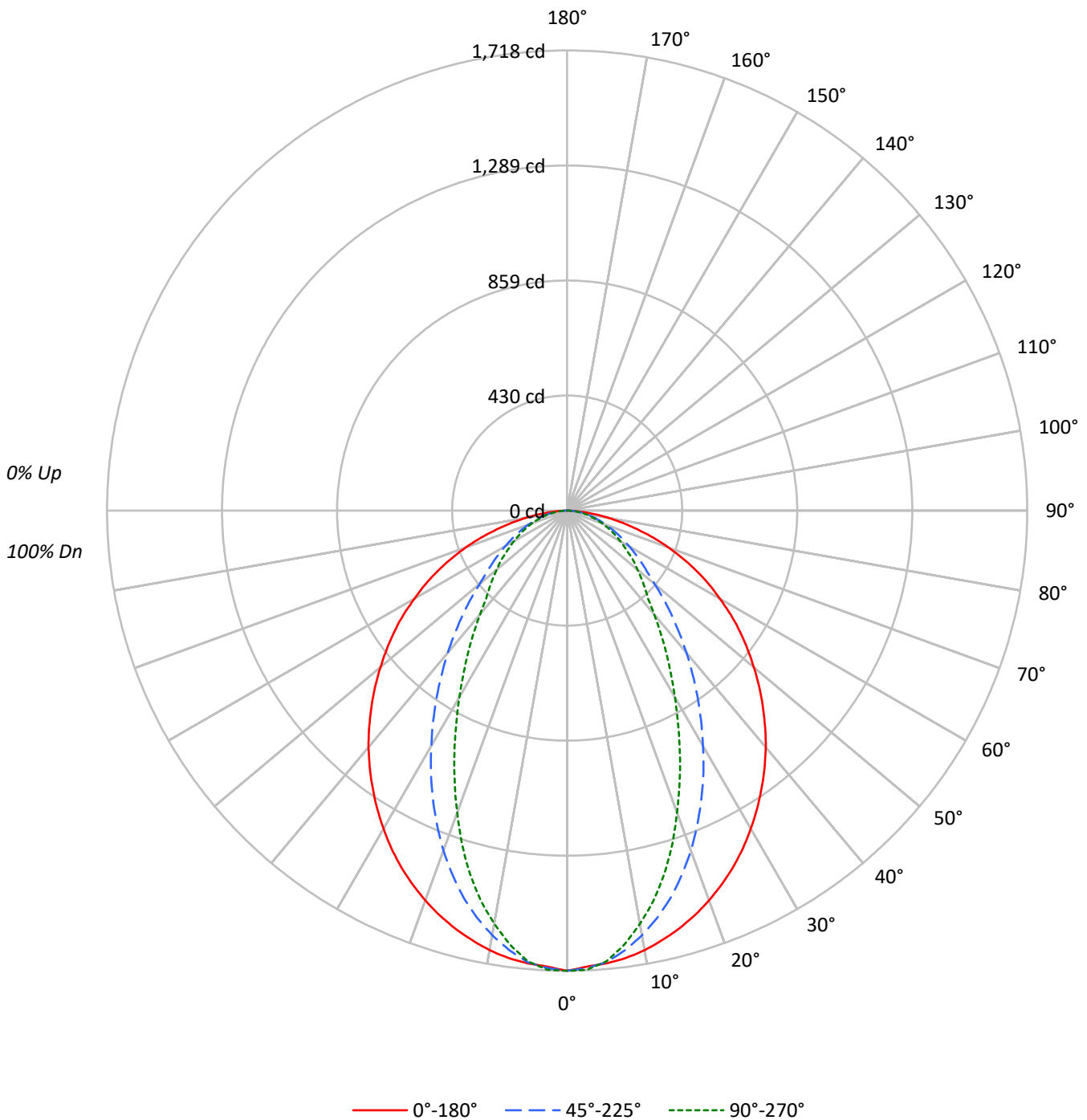
Lumens per Lamp: N/A
Luminaire Lumens: 3013.3 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (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	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°	20714	20714	20714
5°	20529	20482	20436
10°	20404	19713	19178
15°	20162	18670	17516
20°	19868	17328	15399
25°	19522	15778	13248
30°	19089	14115	11198
35°	18630	12482	9456
40°	18162	10900	7948
45°	17616	9400	7011
50°	17065	8001	6435
55°	16557	7132	5942
60°	15866	6445	5546
65°	15214	5902	5206
70°	14178	5436	4893
75°	12689	5026	4607
80°	10887	4638	4284
85°	7650	4261	4095

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17616 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.3	5.3
10°-20°	421.4	14.0
20°-30°	555.1	18.4
30°-40°	563.4	18.7
40°-50°	489.7	16.3
50°-60°	383.7	12.7
60°-70°	260.7	8.7
70°-80°	141.3	4.7
80°-90°	38.9	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°	1135.7	37.7
0°-40°	1699.1	56.4
0°-60°	2572.5	85.4
0°-90°	3013.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3013.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1718	1718	1718	1718	1718	
5°	1696	1717	1692	1677	1689	161
15°	1615	1592	1496	1423	1403	455
25°	1468	1379	1186	1038	996	676
35°	1266	1115	848	686	642	792
45°	1033	829	551	425	411	797
55°	788	547	339	289	283	703
65°	533	296	207	185	182	527
75°	272	136	108	100	99	291
85°	55	33	31	28	30	70
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1718.1	1718.1	1718.1	1718.1	1718.1
2.5°	1704.0	1725.8	1709.1	1710.4	1715.6
5°	1696.3	1716.8	1692.4	1677.0	1688.6
7.5°	1684.7	1700.1	1655.2	1630.7	1634.6
10°	1666.7	1671.9	1610.2	1571.6	1566.5
12.5°	1642.3	1633.3	1556.2	1499.7	1490.7
15°	1615.3	1592.2	1495.8	1422.6	1403.3
17.5°	1584.5	1545.9	1425.1	1335.2	1305.6
20°	1548.5	1494.5	1350.6	1236.2	1200.2
22.5°	1510.0	1440.6	1269.6	1134.7	1097.4
25°	1467.5	1378.9	1186.1	1038.3	995.9
27.5°	1421.3	1317.2	1101.3	943.2	895.7
30°	1371.2	1252.9	1013.9	850.7	804.4
32.5°	1319.8	1184.8	930.4	764.6	719.6
35°	1265.8	1115.4	848.1	686.2	642.5
37.5°	1210.5	1044.8	768.5	611.7	570.6
40°	1154.0	972.8	692.6	542.3	505.0
42.5°	1093.6	900.8	619.4	476.8	448.5
45°	1033.2	828.9	551.3	425.4	411.2
47.5°	972.8	755.6	487.0	389.4	376.5
50°	909.8	684.9	426.6	356.0	343.1
52.5°	848.1	615.5	376.5	323.8	314.8
55°	787.7	547.4	339.3	289.1	282.7
57.5°	724.8	480.6	302.0	262.2	254.4
60°	658.0	416.4	267.3	233.9	230.0
62.5°	597.6	356.0	236.5	209.5	205.6
65°	533.3	295.6	206.9	185.0	182.5
67.5°	467.8	245.4	179.9	161.9	160.6
70°	402.2	206.9	154.2	140.1	138.8
72.5°	338.0	170.9	129.8	120.8	118.2
75°	272.4	136.2	107.9	100.2	98.9
77.5°	213.3	105.4	86.1	81.0	79.7
80°	156.8	78.4	66.8	63.0	61.7
82.5°	102.8	54.0	47.5	45.0	45.0
85°	55.3	33.4	30.8	28.3	29.6
87.5°	19.3	14.1	14.1	12.9	14.1
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	21.09	22.58	21.45	22.89	23.21	16.24	17.73	16.60	18.04	18.36
	3H	22.97	24.31	23.35	24.64	25.00	17.87	19.20	18.24	19.53	19.89
	4H	23.73	24.99	24.13	25.34	25.71	18.50	19.76	18.90	20.11	20.49
	6H	24.30	25.46	24.71	25.82	26.21	18.99	20.15	19.40	20.52	20.91
	8H	24.47	25.57	24.90	25.96	26.36	19.16	20.27	19.59	20.66	21.06
	12H	24.57	25.62	25.00	26.00	26.43	19.29	20.34	19.72	20.73	21.16
4H	2H	21.13	22.39	21.53	22.74	23.12	16.97	18.22	17.37	18.57	18.95
	3H	23.15	24.19	23.56	24.60	25.00	18.79	19.83	19.20	20.23	20.63
	4H	23.97	24.91	24.40	25.32	25.76	19.53	20.47	19.97	20.89	21.33
	6H	24.65	25.47	25.11	25.91	26.37	20.14	20.96	20.60	21.40	21.86
	8H	24.88	25.65	25.35	26.09	26.56	20.36	21.12	20.82	21.57	22.03
	12H	25.03	25.72	25.52	26.19	26.67	20.53	21.21	21.01	21.69	22.16
8H	4H	23.99	24.76	24.46	25.20	25.67	19.92	20.68	20.38	21.12	21.59
	6H	24.72	25.35	25.22	25.84	26.32	20.65	21.28	21.14	21.77	22.25
	8H	24.99	25.56	25.51	26.07	26.56	20.93	21.50	21.45	22.01	22.50
	12H	25.20	25.70	25.71	26.19	26.76	21.18	21.68	21.69	22.17	22.74
12H	4H	23.98	24.66	24.46	25.14	25.61	19.97	20.65	20.45	21.13	21.60
	6H	24.71	25.27	25.22	25.78	26.27	20.73	21.29	21.24	21.80	22.29
	8H	25.01	25.51	25.52	26.00	26.57	21.07	21.57	21.58	22.07	22.63