

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: P1055551

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055551
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-S1000D835-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, 80 CRI LEDS
Ballast/Driver: -

Summary

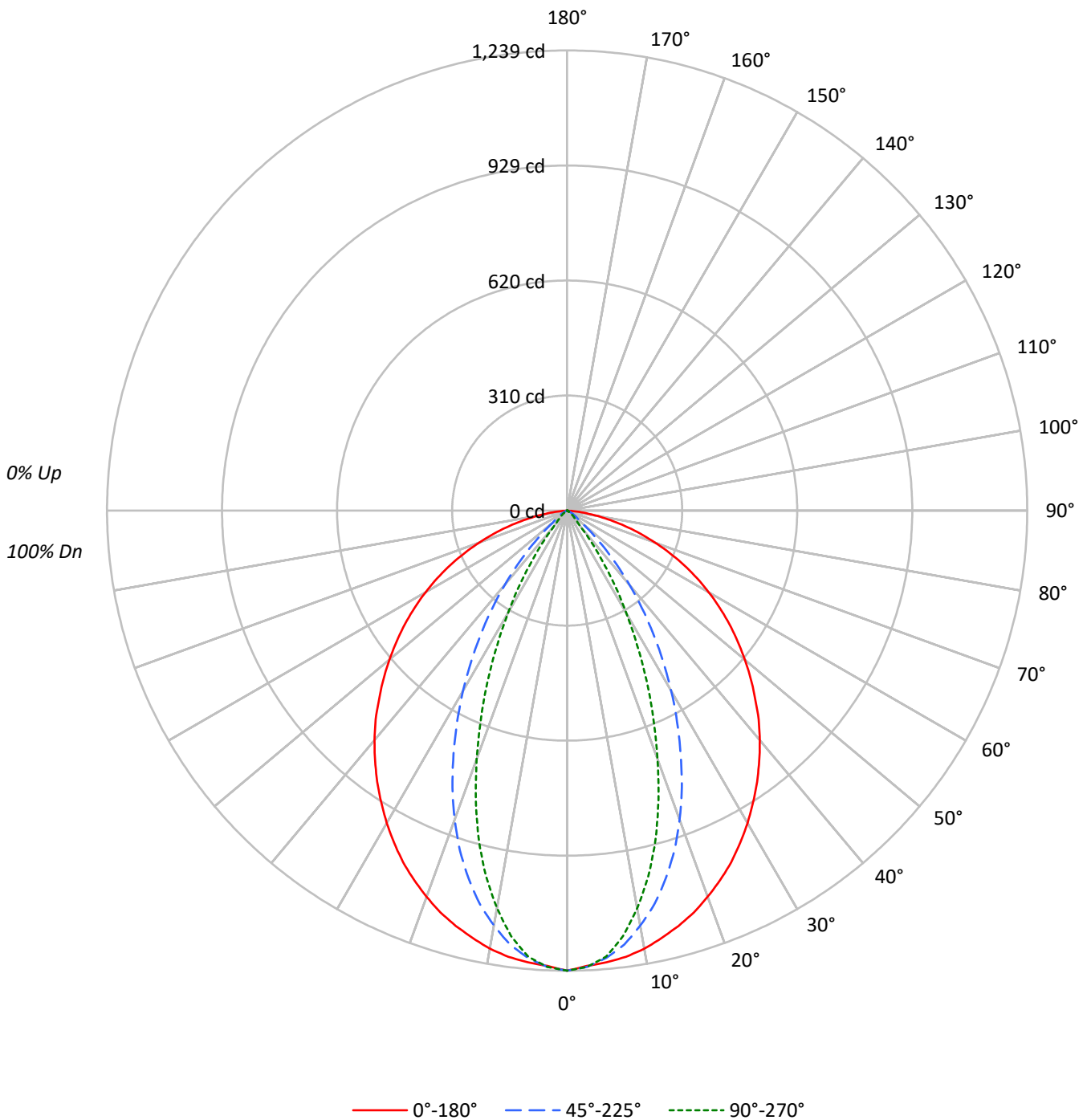
Lumens per Lamp: N/A
Luminaire Lumens: 1449.9 lumens
Efficiency: N/A
Efficacy: 41.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	14935	14935	14935
5°	14775	14634	14588
10°	14663	13891	13310
15°	14451	12800	11468
20°	14195	11360	9134
25°	13899	9625	6735
30°	13525	7800	4419
35°	13126	5939	2421
40°	12701	4106	829
45°	12205	2389	483
50°	11713	940	289
55°	11210	595	135
60°	10629	371	63
65°	9899	183	37
70°	8880	92	46
75°	7542	61	61
80°	5624	90	0
85°	2130	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12205 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.6	7.8
10°-20°	288.2	19.9
20°-30°	343.8	23.7
30°-40°	291.7	20.1
40°-50°	198.2	13.7
50°-60°	122.9	8.5
60°-70°	62.2	4.3
70°-80°	25.4	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°	745.6	51.4
0°-40°	1037.3	71.5
0°-60°	1358.4	93.7
0°-90°	1449.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1449.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1221	1232	1209	1200	1205	116
15°	1158	1128	1026	944	919	326
25°	1045	947	724	559	506	481
35°	892	716	404	217	164	557
45°	716	469	140	35	28	553
55°	533	236	28	10	6	476
65°	347	58	6	1	1	343
75°	162	10	1	1	1	172
85°	15	0	0	1	0	27
90°	0	0	0	0	0	



TEST NUMBER: P105551

CATALOG NUMBER: S123R3DR-S1000D835-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1227.2	1243.9	1229.8	1228.5	1229.8
5°	1220.8	1232.4	1209.2	1200.2	1205.4
7.5°	1211.8	1217.0	1178.4	1155.3	1155.3
10°	1197.7	1193.8	1134.7	1096.2	1087.2
12.5°	1178.4	1163.0	1085.9	1025.5	1008.8
15°	1157.8	1128.3	1025.5	944.5	918.8
17.5°	1134.7	1089.7	959.9	854.6	817.3
20°	1106.4	1046.0	885.4	756.9	711.9
22.5°	1076.9	998.5	807.0	656.7	606.5
25°	1044.8	947.1	723.5	559.0	506.3
27.5°	1008.8	893.1	641.2	465.2	407.4
30°	971.5	836.6	560.3	375.2	317.4
32.5°	931.7	777.5	479.3	293.0	239.0
35°	891.8	715.8	403.5	217.2	164.5
37.5°	849.4	654.1	330.3	150.4	104.1
40°	807.0	593.7	260.9	95.1	52.7
42.5°	763.3	530.7	197.9	47.5	36.0
45°	715.8	469.0	140.1	34.7	28.3
47.5°	670.8	409.9	92.5	28.3	21.8
50°	624.5	350.8	50.1	20.6	15.4
52.5°	578.3	294.3	36.0	15.4	10.3
55°	533.3	236.5	28.3	10.3	6.4
57.5°	487.0	186.3	21.8	6.4	3.9
60°	440.8	137.5	15.4	3.9	2.6
62.5°	394.5	95.1	10.3	2.6	1.3
65°	347.0	57.8	6.4	1.3	1.3
67.5°	298.1	39.8	3.9	1.3	1.3
70°	251.9	28.3	2.6	1.3	1.3
72.5°	205.6	18.0	1.3	1.3	0.0
75°	161.9	10.3	1.3	1.3	1.3
77.5°	119.5	3.9	1.3	1.3	0.0
80°	81.0	1.3	1.3	1.3	0.0
82.5°	45.0	0.0	1.3	1.3	0.0
85°	15.4	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



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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	18.44	19.72	18.81	20.03	20.35	0.00	0.00	0.00	0.00	0.00
	3H	20.39	21.52	20.77	21.85	22.22	0.00	0.00	0.00	0.00	0.00
	4H	21.21	22.27	21.62	22.62	23.00	0.00	0.00	0.00	0.00	0.00
	6H	21.77	22.74	22.18	23.11	23.50	0.00	0.00	0.00	0.00	0.00
	8H	21.89	22.81	22.32	23.20	23.61	0.00	0.00	0.00	0.00	0.00
	12H	21.92	22.79	22.35	23.18	23.61	0.00	0.00	0.00	0.00	0.00
4H	2H	18.20	19.26	18.61	19.61	19.99	0.00	0.00	0.00	0.00	0.00
	3H	20.16	21.02	20.57	21.42	21.83	0.00	0.00	0.00	0.00	0.00
	4H	20.97	21.74	21.41	22.16	22.60	0.00	0.00	0.00	0.00	0.00
	6H	21.57	22.24	22.04	22.68	23.15	0.00	0.00	0.00	0.00	0.00
	8H	21.72	22.34	22.20	22.79	23.26	0.00	0.00	0.00	0.00	0.00
	12H	21.77	22.32	22.26	22.80	23.27	0.00	0.00	0.00	0.00	0.00
8H	4H	20.83	21.45	21.30	21.89	22.37	0.00	0.00	0.00	0.00	0.00
	6H	21.41	21.91	21.91	22.41	22.89	0.00	0.00	0.00	0.00	0.00
	8H	21.56	22.01	22.08	22.53	23.02	0.00	0.00	0.00	0.00	0.00
	12H	21.62	22.01	22.13	22.51	23.08	0.00	0.00	0.00	0.00	0.00
12H	4H	20.78	21.32	21.27	21.81	22.28	0.00	0.00	0.00	0.00	0.00
	6H	21.35	21.80	21.87	22.31	22.81	0.00	0.00	0.00	0.00	0.00
	8H	21.52	21.91	22.03	22.41	22.98	0.00	0.00	0.00	0.00	0.00