

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: P1055587

Luminaire Tested: S123R3DR-S1165D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055587
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-S1165D927-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

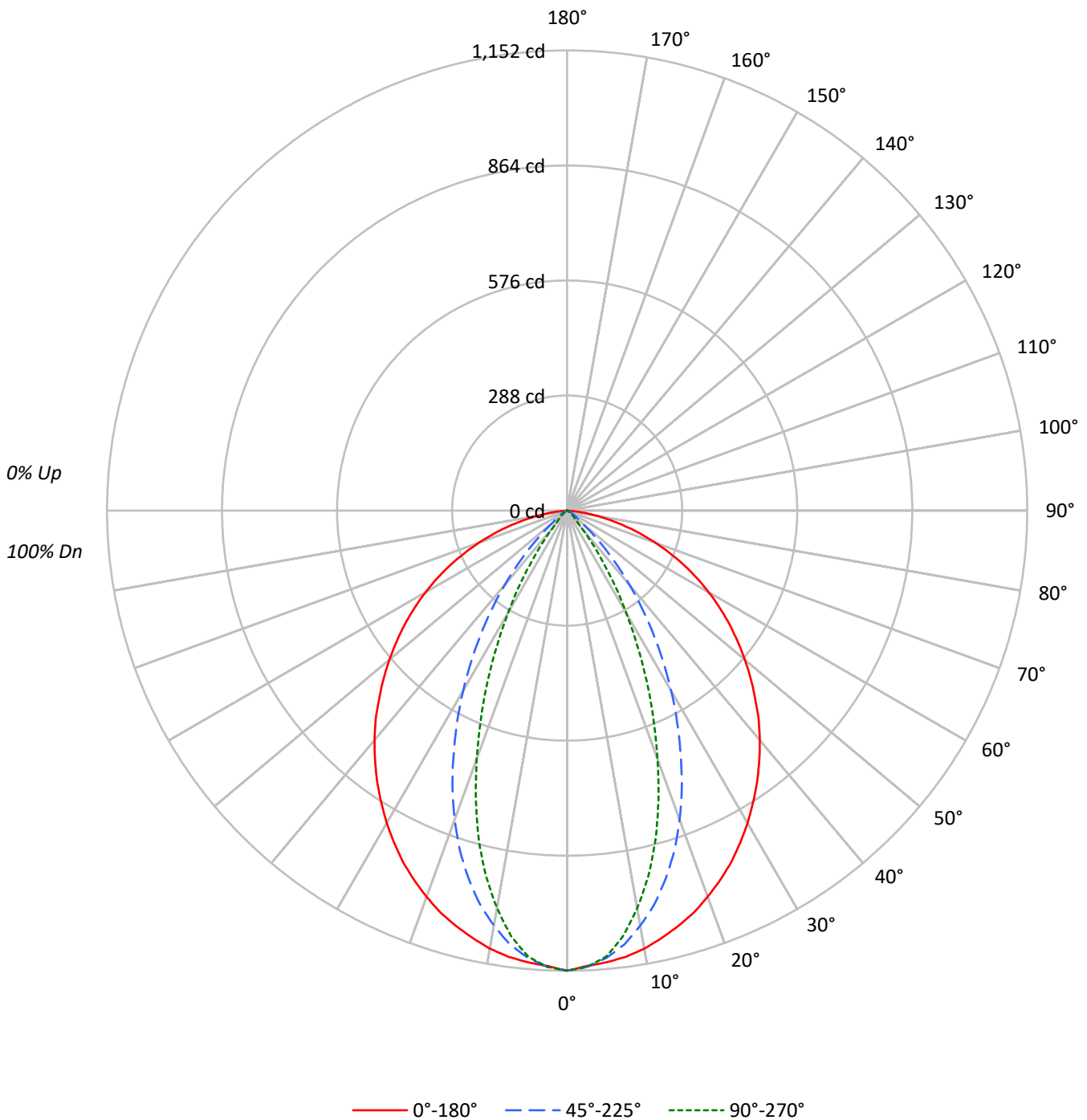
Lumens per Lamp: N/A
Luminaire Lumens: 1348.0 lumens
Efficiency: N/A
Efficacy: 32.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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: P1055587

CATALOG NUMBER: S123R3DR-S1165D927-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	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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90					90			
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73					73			
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65					65			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59					59			
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54					54			
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50					50			
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46					46			
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43					43			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40					40			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13885	13885	13885
5°	13736	13606	13563
10°	13632	12915	12373
15°	13435	11900	10662
20°	13198	10562	8492
25°	12921	8947	6262
30°	12574	7252	4108
35°	12203	5521	2250
40°	11809	3817	771
45°	11347	2220	448
50°	10890	874	268
55°	10422	553	126
60°	9881	345	58
65°	9203	171	34
70°	8256	85	42
75°	7011	56	56
80°	5228	83	0
85°	1978	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11347 cd/sqm



TEST NUMBER: P1055587

CATALOG NUMBER: S123R3DR-S1165D927-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	7.8
10°-20°	268.0	19.9
20°-30°	319.7	23.7
30°-40°	271.1	20.1
40°-50°	184.3	13.7
50°-60°	114.2	8.5
60°-70°	57.9	4.3
70°-80°	23.6	1.8
80°-90°	3.6	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°	693.2	51.4
0°-40°	964.4	71.5
0°-60°	1262.9	93.7
0°-90°	1348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1152	1152	1152	1152	1152	
5°	1135	1146	1124	1116	1121	108
15°	1076	1049	953	878	854	303
25°	971	880	673	520	471	447
35°	829	666	375	202	153	518
45°	666	436	130	32	26	514
55°	496	220	26	10	6	443
65°	323	54	6	1	1	319
75°	150	10	1	1	1	160
85°	14	0	0	1	0	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1151.7	1151.7	1151.7	1151.7	1151.7
2.5°	1141.0	1156.5	1143.4	1142.2	1143.4
5°	1135.0	1145.7	1124.2	1115.9	1120.7
7.5°	1126.6	1131.4	1095.6	1074.1	1074.1
10°	1113.5	1109.9	1054.9	1019.1	1010.7
12.5°	1095.6	1081.2	1009.5	953.4	937.9
15°	1076.4	1049.0	953.4	878.1	854.2
17.5°	1054.9	1013.1	892.5	794.5	759.8
20°	1028.7	972.5	823.2	703.7	661.9
22.5°	1001.2	928.3	750.3	610.5	563.9
25°	971.3	880.5	672.6	519.7	470.7
27.5°	937.9	830.3	596.2	432.5	378.7
30°	903.2	777.8	520.9	348.9	295.1
32.5°	866.2	722.8	445.6	272.4	222.2
35°	829.1	665.5	375.1	201.9	152.9
37.5°	789.7	608.1	307.0	139.8	96.8
40°	750.3	552.0	242.5	88.4	49.0
42.5°	709.7	493.4	184.0	44.2	33.5
45°	665.5	436.1	130.2	32.3	26.3
47.5°	623.6	381.1	86.0	26.3	20.3
50°	580.6	326.2	46.6	19.1	14.3
52.5°	537.6	273.6	33.5	14.3	9.6
55°	495.8	219.8	26.3	9.6	6.0
57.5°	452.8	173.2	20.3	6.0	3.6
60°	409.8	127.8	14.3	3.6	2.4
62.5°	366.8	88.4	9.6	2.4	1.2
65°	322.6	53.8	6.0	1.2	1.2
67.5°	277.2	37.0	3.6	1.2	1.2
70°	234.2	26.3	2.4	1.2	1.2
72.5°	191.2	16.7	1.2	1.2	0.0
75°	150.5	9.6	1.2	1.2	1.2
77.5°	111.1	3.6	1.2	1.2	0.0
80°	75.3	1.2	1.2	1.2	0.0
82.5°	41.8	0.0	1.2	1.2	0.0
85°	14.3	0.0	0.0	1.2	0.0
87.5°	0.0	0.0	0.0	1.2	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	18.19	19.47	18.55	19.78	20.10	0.00	0.00	0.00	0.00	0.00
	3H	20.13	21.27	20.51	21.60	21.96	0.00	0.00	0.00	0.00	0.00
	4H	20.96	22.02	21.36	22.37	22.75	0.00	0.00	0.00	0.00	0.00
	6H	21.51	22.48	21.93	22.85	23.25	0.00	0.00	0.00	0.00	0.00
	8H	21.64	22.56	22.07	22.95	23.35	0.00	0.00	0.00	0.00	0.00
	12H	21.66	22.54	22.10	22.92	23.35	0.00	0.00	0.00	0.00	0.00
4H	2H	17.95	19.01	18.35	19.36	19.74	0.00	0.00	0.00	0.00	0.00
	3H	19.90	20.77	20.32	21.17	21.57	0.00	0.00	0.00	0.00	0.00
	4H	20.72	21.49	21.15	21.91	22.35	0.00	0.00	0.00	0.00	0.00
	6H	21.32	21.98	21.78	22.43	22.90	0.00	0.00	0.00	0.00	0.00
	8H	21.47	22.09	21.94	22.54	23.01	0.00	0.00	0.00	0.00	0.00
	12H	21.52	22.06	22.01	22.55	23.02	0.00	0.00	0.00	0.00	0.00
8H	4H	20.58	21.19	21.05	21.64	22.11	0.00	0.00	0.00	0.00	0.00
	6H	21.16	21.66	21.66	22.16	22.64	0.00	0.00	0.00	0.00	0.00
	8H	21.31	21.76	21.83	22.27	22.77	0.00	0.00	0.00	0.00	0.00
	12H	21.36	21.76	21.88	22.26	22.83	0.00	0.00	0.00	0.00	0.00
12H	4H	20.53	21.07	21.01	21.56	22.03	0.00	0.00	0.00	0.00	0.00
	6H	21.09	21.54	21.62	22.06	22.55	0.00	0.00	0.00	0.00	0.00
	8H	21.26	21.66	21.78	22.15	22.73	0.00	0.00	0.00	0.00	0.00