

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: P1055973

Luminaire Tested: S124R3DRP-S1020D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055973
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DRP-S1020D935-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

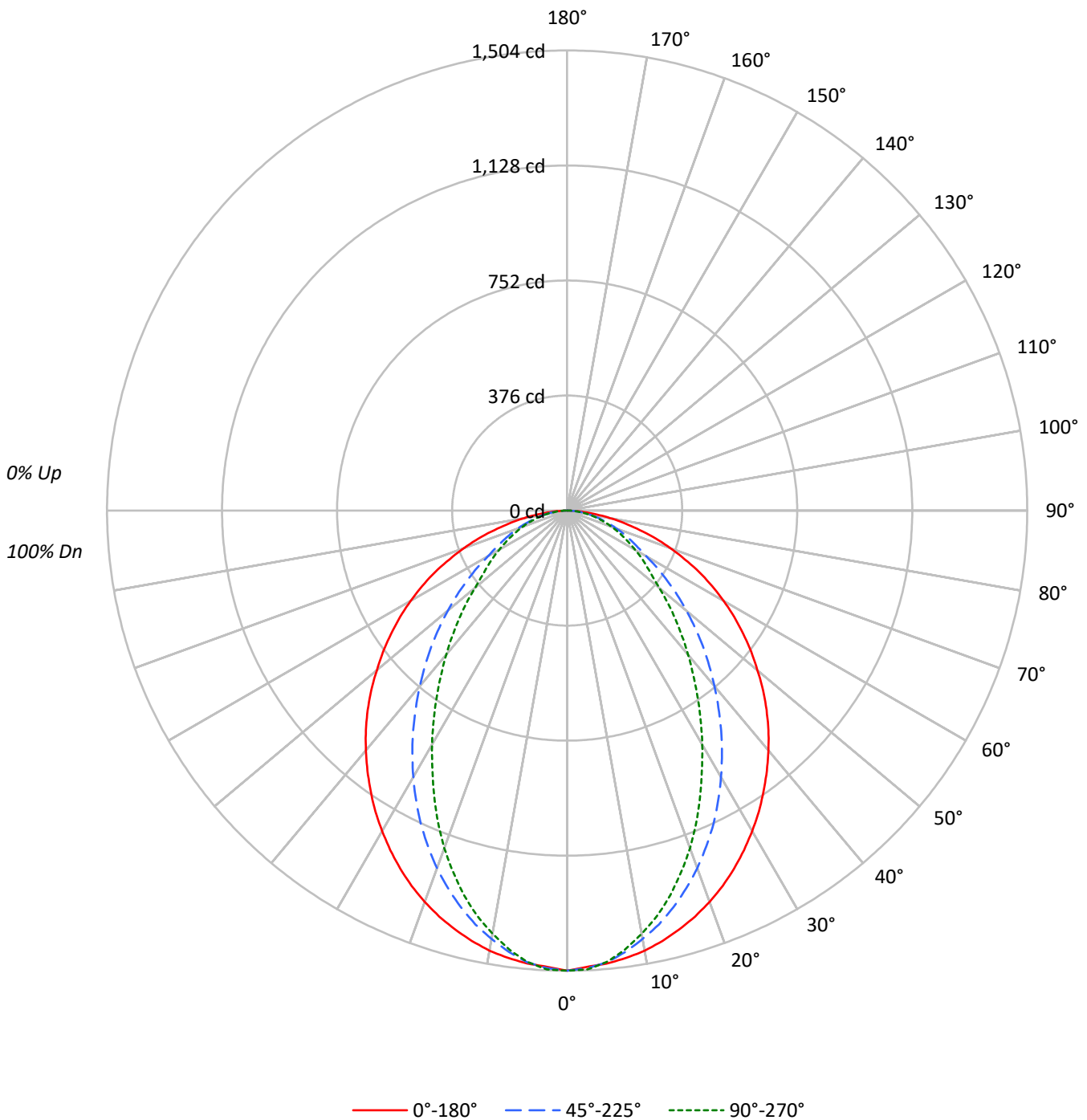
Lumens per Lamp: N/A
Luminaire Lumens: 2994.9 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76					73				
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65					63				
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13295	13295	13295
5°	13188	13158	13149
10°	13112	12765	12606
15°	12973	12285	11910
20°	12804	11701	11045
25°	12596	11031	10038
30°	12346	10268	9014
35°	12085	9470	8025
40°	11813	8646	7100
45°	11525	7845	6239
50°	11170	7001	5388
55°	10830	6157	4894
60°	10447	5282	4539
65°	9977	4791	4236
70°	9267	4433	4004
75°	8390	4082	3778
80°	7322	3773	3549
85°	5610	3480	3256

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11525 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.0	4.7
10°-20°	379.7	12.7
20°-30°	525.8	17.6
30°-40°	564.3	18.8
40°-50°	513.2	17.1
50°-60°	404.1	13.5
60°-70°	276.6	9.2
70°-80°	148.9	5.0
80°-90°	42.2	1.4
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°	1045.5	34.9
0°-40°	1609.8	53.8
0°-60°	2527.2	84.4
0°-90°	2994.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2994.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1486	1502	1483	1475	1482	141
15°	1417	1402	1342	1306	1301	400
25°	1291	1238	1131	1049	1029	595
35°	1120	1032	877	771	744	700
45°	922	804	627	519	499	711
55°	703	569	399	322	318	628
65°	477	341	229	204	202	470
75°	246	149	120	110	111	262
85°	55	38	34	32	32	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1503.7	1503.7	1503.7	1503.7	1503.7
2.5°	1492.6	1510.3	1497.0	1499.2	1501.4
5°	1485.9	1502.5	1482.6	1474.9	1481.5
7.5°	1474.9	1485.9	1455.0	1440.6	1447.2
10°	1460.5	1462.7	1421.8	1400.8	1404.1
12.5°	1440.6	1435.1	1385.3	1355.4	1357.6
15°	1417.3	1401.9	1342.1	1305.6	1301.2
17.5°	1390.8	1365.3	1294.5	1248.1	1239.2
20°	1360.9	1326.6	1243.6	1183.9	1173.9
22.5°	1327.7	1283.5	1188.3	1117.5	1103.1
25°	1291.2	1238.1	1130.8	1048.9	1029.0
27.5°	1251.4	1189.4	1068.8	979.2	953.8
30°	1209.3	1138.5	1005.8	909.5	882.9
32.5°	1166.2	1086.5	941.6	839.8	812.1
35°	1119.7	1032.3	877.4	771.2	743.5
37.5°	1072.1	975.9	812.1	704.8	676.0
40°	1023.5	919.5	749.1	638.4	615.2
42.5°	973.7	861.9	687.1	576.5	555.4
45°	921.7	804.4	627.4	518.9	499.0
47.5°	868.6	745.7	566.5	464.7	445.9
50°	812.1	687.1	509.0	411.6	391.7
52.5°	757.9	627.4	453.6	359.6	349.6
55°	702.6	568.7	399.4	322.0	317.5
57.5°	647.3	510.1	349.6	292.1	287.7
60°	590.8	452.5	298.7	261.1	256.7
62.5°	534.4	396.1	261.1	231.2	229.0
65°	476.9	340.8	229.0	203.6	202.5
67.5°	416.0	287.7	200.3	179.2	178.1
70°	358.5	234.6	171.5	154.9	154.9
72.5°	304.3	185.9	144.9	131.7	131.7
75°	245.6	149.4	119.5	109.5	110.6
77.5°	193.6	117.3	96.3	89.6	89.6
80°	143.8	87.4	74.1	68.6	69.7
82.5°	97.4	60.9	53.1	49.8	49.8
85°	55.3	37.6	34.3	32.1	32.1
87.5°	19.9	17.7	16.6	14.4	15.5
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	20.13	21.66	20.50	21.97	22.28	15.91	17.43	16.27	17.75	18.06
	3H	21.91	23.28	22.28	23.60	23.97	17.52	18.89	17.90	19.22	19.58
	4H	22.58	23.86	22.98	24.21	24.59	18.15	19.44	18.55	19.79	20.16
	6H	23.09	24.28	23.50	24.64	25.03	18.65	19.84	19.06	20.20	20.60
	8H	23.25	24.38	23.68	24.77	25.17	18.82	19.95	19.25	20.34	20.74
	12H	23.35	24.43	23.78	24.82	25.24	18.94	20.03	19.37	20.41	20.84
4H	2H	20.23	21.51	20.63	21.86	22.24	16.63	17.91	17.03	18.26	18.64
	3H	22.17	23.24	22.58	23.64	24.04	18.43	19.50	18.84	19.90	20.30
	4H	22.93	23.89	23.36	24.31	24.74	19.17	20.13	19.60	20.55	20.99
	6H	23.56	24.40	24.02	24.84	25.30	19.79	20.63	20.24	21.07	21.53
	8H	23.78	24.57	24.24	25.01	25.48	20.00	20.79	20.47	21.23	21.70
	12H	23.94	24.64	24.42	25.12	25.59	20.17	20.87	20.65	21.35	21.82
8H	4H	22.98	23.77	23.45	24.21	24.68	19.56	20.34	20.02	20.79	21.26
	6H	23.68	24.33	24.18	24.82	25.30	20.29	20.94	20.79	21.43	21.91
	8H	23.95	24.53	24.46	25.04	25.53	20.58	21.16	21.09	21.67	22.16
	12H	24.17	24.68	24.68	25.18	25.74	20.83	21.34	21.33	21.83	22.40
12H	4H	22.98	23.68	23.46	24.16	24.63	19.62	20.32	20.10	20.79	21.27
	6H	23.68	24.26	24.19	24.77	25.26	20.37	20.96	20.89	21.47	21.95
	8H	23.98	24.50	24.49	24.99	25.56	20.72	21.24	21.23	21.73	22.29