

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: P1056060

Luminaire Tested: S124R3DR-S575D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056060
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: S124R3DR-S575D950-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

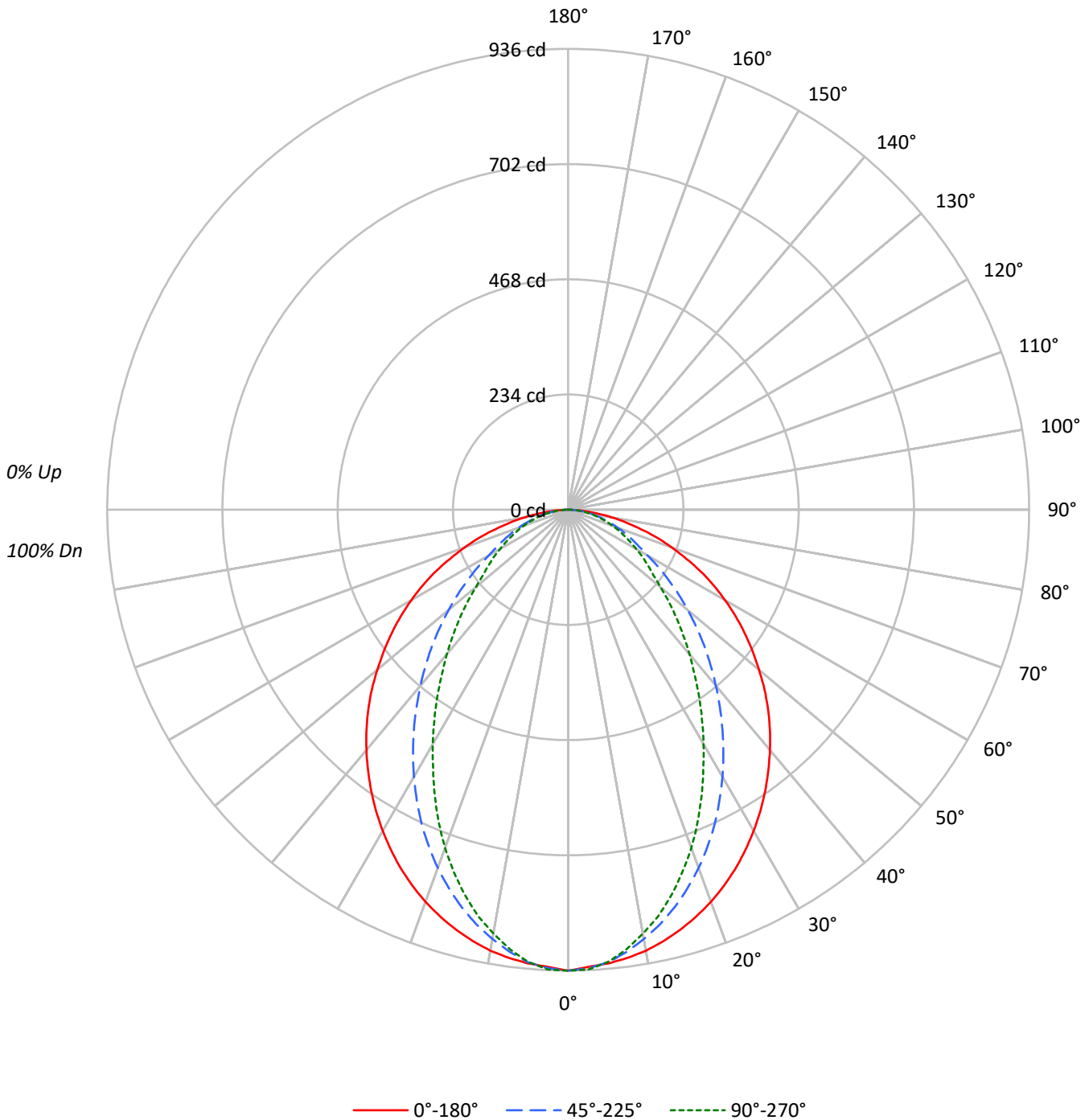
Lumens per Lamp: N/A
Luminaire Lumens: 1864.8 lumens
Efficiency: N/A
Efficacy: 97.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	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°	8277	8277	8277
5°	8211	8194	8187
10°	8164	7948	7848
15°	8078	7649	7416
20°	7973	7286	6878
25°	7843	6869	6250
30°	7687	6393	5613
35°	7525	5896	4997
40°	7355	5383	4420
45°	7176	4884	3885
50°	6956	4359	3355
55°	6744	3834	3047
60°	6505	3289	2826
65°	6211	2983	2638
70°	5770	2761	2492
75°	5223	2542	2354
80°	4562	2352	2210
85°	3490	2171	2029

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7176 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.2	4.7
10°-20°	236.4	12.7
20°-30°	327.4	17.6
30°-40°	351.4	18.8
40°-50°	319.5	17.1
50°-60°	251.6	13.5
60°-70°	172.2	9.2
70°-80°	92.7	5.0
80°-90°	26.3	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°	651.0	34.9
0°-40°	1002.4	53.8
0°-60°	1573.6	84.4
0°-90°	1864.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1864.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	925	936	923	918	922	88
15°	882	873	836	813	810	249
25°	804	771	704	653	641	370
35°	697	643	546	480	463	436
45°	574	501	391	323	311	442
55°	438	354	249	200	198	391
65°	297	212	143	127	126	293
75°	153	93	74	68	69	163
85°	34	23	21	20	20	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	936.2	936.2	936.2	936.2	936.2
2.5°	929.4	940.4	932.1	933.5	934.9
5°	925.2	935.6	923.2	918.3	922.5
7.5°	918.3	925.2	905.9	897.0	901.1
10°	909.4	910.8	885.3	872.2	874.2
12.5°	897.0	893.5	862.5	843.9	845.3
15°	882.5	872.9	835.7	812.9	810.2
17.5°	866.0	850.1	806.0	777.1	771.6
20°	847.4	826.0	774.4	737.2	731.0
22.5°	826.7	799.2	739.9	695.8	686.9
25°	804.0	770.9	704.1	653.1	640.7
27.5°	779.2	740.6	665.5	609.7	593.9
30°	753.0	708.9	626.2	566.3	549.8
32.5°	726.1	676.5	586.3	522.9	505.7
35°	697.2	642.8	546.3	480.2	463.0
37.5°	667.6	607.6	505.7	438.8	420.9
40°	637.3	572.5	466.4	397.5	383.0
42.5°	606.3	536.7	427.8	358.9	345.8
45°	573.9	500.8	390.6	323.1	310.7
47.5°	540.8	464.3	352.7	289.3	277.6
50°	505.7	427.8	316.9	256.3	243.9
52.5°	471.9	390.6	282.5	223.9	217.7
55°	437.5	354.1	248.7	200.5	197.7
57.5°	403.0	317.6	217.7	181.9	179.1
60°	367.9	281.8	186.0	162.6	159.8
62.5°	332.8	246.6	162.6	144.0	142.6
65°	296.9	212.2	142.6	126.8	126.1
67.5°	259.0	179.1	124.7	111.6	110.9
70°	223.2	146.1	106.8	96.4	96.4
72.5°	189.5	115.7	90.2	82.0	82.0
75°	152.9	93.0	74.4	68.2	68.9
77.5°	120.6	73.0	59.9	55.8	55.8
80°	89.6	54.4	46.2	42.7	43.4
82.5°	60.6	37.9	33.1	31.0	31.0
85°	34.4	23.4	21.4	20.0	20.0
87.5°	12.4	11.0	10.3	9.0	9.6
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	18.48	20.01	18.85	20.32	20.64	14.26	15.79	14.63	16.10	16.42
	3H	20.26	21.63	20.64	21.96	22.32	15.87	17.24	16.25	17.57	17.93
	4H	20.93	22.22	21.33	22.57	22.94	16.50	17.79	16.90	18.14	18.52
	6H	21.44	22.63	21.85	23.00	23.39	17.00	18.19	17.42	18.56	18.95
	8H	21.60	22.74	22.03	23.13	23.53	17.17	18.31	17.60	18.70	19.10
	12H	21.70	22.79	22.13	23.17	23.60	17.30	18.38	17.73	18.76	19.19
4H	2H	18.58	19.87	18.98	20.21	20.59	14.98	16.27	15.38	16.62	16.99
	3H	20.52	21.59	20.94	21.99	22.40	16.79	17.86	17.20	18.26	18.66
	4H	21.28	22.24	21.71	22.66	23.10	17.52	18.49	17.96	18.90	19.34
	6H	21.92	22.75	22.37	23.20	23.66	18.14	18.98	18.60	19.42	19.88
	8H	22.13	22.92	22.60	23.36	23.83	18.36	19.14	18.82	19.59	20.05
	12H	22.29	22.99	22.77	23.47	23.94	18.52	19.23	19.01	19.70	20.18
8H	4H	21.34	22.12	21.80	22.57	23.03	17.91	18.70	18.38	19.14	19.61
	6H	22.04	22.69	22.53	23.18	23.65	18.65	19.29	19.14	19.79	20.26
	8H	22.30	22.89	22.82	23.40	23.88	18.93	19.52	19.45	20.03	20.51
	12H	22.52	23.04	23.03	23.53	24.09	19.18	19.69	19.69	20.19	20.75
12H	4H	21.33	22.03	21.81	22.51	22.98	17.97	18.67	18.45	19.15	19.62
	6H	22.03	22.61	22.54	23.12	23.61	18.73	19.31	19.24	19.82	20.31
	8H	22.34	22.85	22.85	23.35	23.91	19.08	19.59	19.59	20.08	20.65