

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: P1056054

Luminaire Tested: S124R3DR-S575D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056054
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-S575D935-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

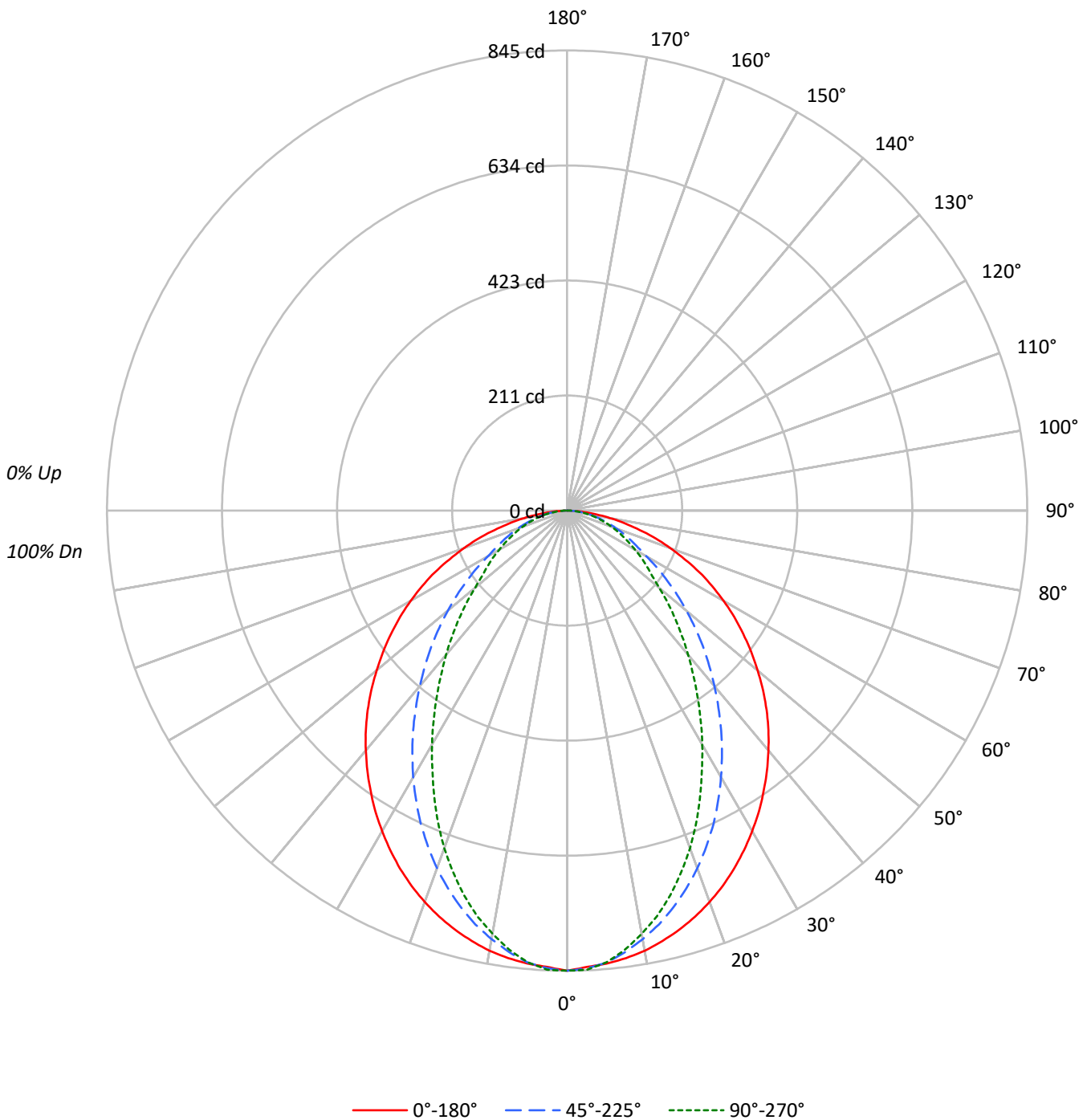
Lumens per Lamp: N/A
Luminaire Lumens: 1683.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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°	7471	7471	7471
5°	7411	7395	7389
10°	7368	7173	7083
15°	7291	6903	6693
20°	7196	6576	6207
25°	7079	6199	5641
30°	6938	5770	5066
35°	6791	5322	4509
40°	6638	4858	3990
45°	6476	4408	3506
50°	6278	3934	3027
55°	6086	3461	2750
60°	5871	2969	2550
65°	5607	2692	2381
70°	5209	2492	2249
75°	4714	2296	2125
80°	4114	2123	1996
85°	3155	1958	1826

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6476 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	4.7
10°-20°	213.4	12.7
20°-30°	295.5	17.6
30°-40°	317.1	18.8
40°-50°	288.4	17.1
50°-60°	227.1	13.5
60°-70°	155.4	9.2
70°-80°	83.7	5.0
80°-90°	23.7	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°	587.5	34.9
0°-40°	904.7	53.8
0°-60°	1420.2	84.4
0°-90°	1683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	845	845	845	845	845	
5°	835	844	833	829	832	79
15°	796	788	754	734	731	225
25°	726	696	635	589	578	334
35°	629	580	493	433	418	394
45°	518	452	352	292	280	399
55°	395	320	224	181	178	353
65°	268	192	129	114	114	264
75°	138	84	67	62	62	147
85°	31	21	19	18	18	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	845.0	845.0	845.0	845.0	845.0
2.5°	838.8	848.7	841.2	842.5	843.7
5°	835.0	844.4	833.2	828.8	832.5
7.5°	828.8	835.0	817.6	809.5	813.3
10°	820.7	822.0	799.0	787.2	789.0
12.5°	809.5	806.4	778.4	761.7	762.9
15°	796.5	787.8	754.2	733.7	731.2
17.5°	781.6	767.3	727.5	701.4	696.4
20°	764.8	745.5	698.9	665.3	659.7
22.5°	746.1	721.2	667.8	628.0	619.9
25°	725.6	695.8	635.4	589.4	578.2
27.5°	703.2	668.4	600.6	550.3	536.0
30°	679.6	639.8	565.2	511.1	496.2
32.5°	655.3	610.6	529.1	471.9	456.4
35°	629.2	580.1	493.1	433.4	417.8
37.5°	602.5	548.4	456.4	396.1	379.9
40°	575.1	516.7	420.9	358.8	345.7
42.5°	547.2	484.4	386.1	323.9	312.1
45°	517.9	452.0	352.5	291.6	280.4
47.5°	488.1	419.1	318.3	261.1	250.6
50°	456.4	386.1	286.0	231.3	220.1
52.5°	425.9	352.5	254.9	202.1	196.5
55°	394.8	319.6	224.5	180.9	178.4
57.5°	363.7	286.6	196.5	164.1	161.7
60°	332.0	254.3	167.9	146.7	144.2
62.5°	300.3	222.6	146.7	129.9	128.7
65°	268.0	191.5	128.7	114.4	113.8
67.5°	233.8	161.7	112.5	100.7	100.1
70°	201.5	131.8	96.4	87.0	87.0
72.5°	171.0	104.5	81.5	74.0	74.0
75°	138.0	83.9	67.2	61.6	62.2
77.5°	108.8	65.9	54.1	50.4	50.4
80°	80.8	49.1	41.7	38.5	39.2
82.5°	54.7	34.2	29.8	28.0	28.0
85°	31.1	21.1	19.3	18.0	18.0
87.5°	11.2	9.9	9.3	8.1	8.7
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	18.13	19.65	18.49	19.97	20.28	13.90	15.43	14.27	15.74	16.06
	3H	19.90	21.27	20.28	21.60	21.96	15.52	16.89	15.89	17.21	17.58
	4H	20.58	21.86	20.97	22.21	22.59	16.15	17.43	16.55	17.78	18.16
	6H	21.08	22.27	21.50	22.64	23.03	16.65	17.84	17.06	18.20	18.59
	8H	21.25	22.38	21.67	22.77	23.17	16.82	17.95	17.25	18.34	18.74
	12H	21.35	22.43	21.78	22.81	23.24	16.94	18.02	17.37	18.41	18.84
4H	2H	18.22	19.51	18.62	19.86	20.24	14.62	15.91	15.02	16.26	16.64
	3H	20.17	21.24	20.58	21.64	22.04	16.43	17.50	16.84	17.90	18.30
	4H	20.92	21.89	21.36	22.30	22.74	17.17	18.13	17.60	18.55	18.99
	6H	21.56	22.40	22.02	22.84	23.30	17.79	18.62	18.24	19.07	19.53
	8H	21.78	22.56	22.24	23.01	23.47	18.00	18.79	18.46	19.23	19.70
	12H	21.93	22.63	22.41	23.11	23.58	18.17	18.87	18.65	19.35	19.82
8H	4H	20.98	21.77	21.44	22.21	22.68	17.56	18.34	18.02	18.79	19.25
	6H	21.68	22.33	22.18	22.82	23.30	18.29	18.94	18.79	19.43	19.91
	8H	21.95	22.53	22.46	23.04	23.53	18.58	19.16	19.09	19.67	20.16
	12H	22.17	22.68	22.68	23.17	23.74	18.82	19.34	19.33	19.83	20.39
12H	4H	20.97	21.67	21.45	22.15	22.62	17.61	18.31	18.10	18.79	19.26
	6H	21.67	22.26	22.19	22.77	23.25	18.37	18.96	18.89	19.47	19.95
	8H	21.98	22.50	22.49	22.99	23.55	18.72	19.24	19.23	19.73	20.29