

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056585

Luminaire Tested: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056585
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

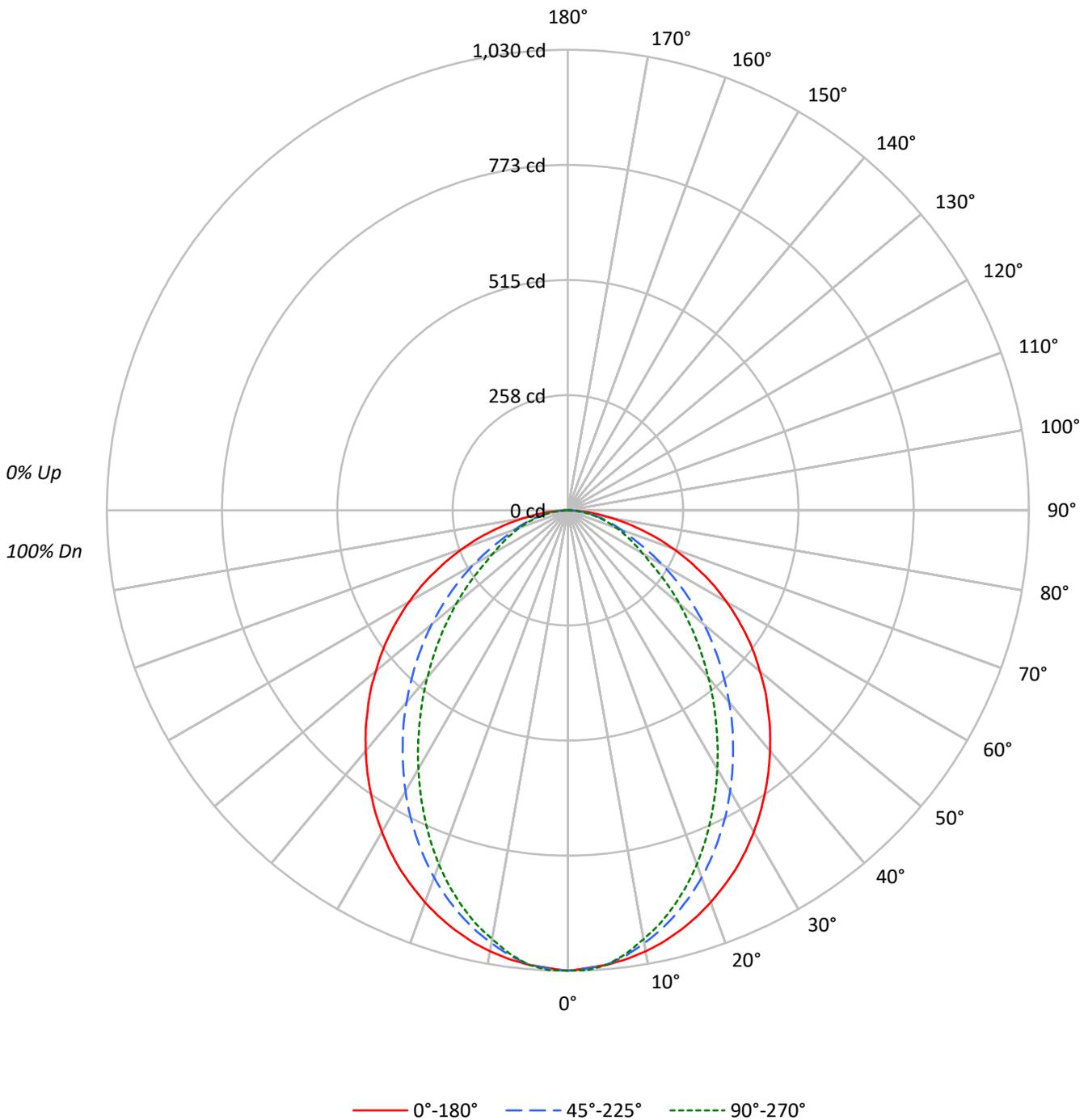
Lumens per Lamp: N/A
Luminaire Lumens: 2182.7 lumens
Efficiency: N/A
Efficacy: 126.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (Ain): 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: P1056585

CATALOG NUMBER: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056585

CATALOG NUMBER: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W

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	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7280	7280	7280
5°	7238	7232	7238
10°	7189	7057	6991
15°	7116	6842	6701
20°	7020	6577	6340
25°	6914	6263	5909
30°	6779	5921	5452
35°	6631	5553	4976
40°	6482	5172	4508
45°	6324	4776	4040
50°	6157	4368	3575
55°	6001	3922	3110
60°	5790	3447	2732
65°	5503	2924	2539
70°	5167	2615	2377
75°	4671	2409	2240
80°	4059	2186	2093
85°	3171	1930	1930

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6324 cd/sqm



TEST NUMBER: P1056585

CATALOG NUMBER: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	4.4
10°-20°	264.6	12.1
20°-30°	373.7	17.1
30°-40°	411.4	18.8
40°-50°	383.8	17.6
50°-60°	306.4	14.0
60°-70°	206.2	9.4
70°-80°	109.8	5.0
80°-90°	30.5	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°	734.7	33.7
0°-40°	1146.1	52.5
0°-60°	1836.2	84.1
0°-90°	2182.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2182.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1020	1028	1019	1016	1020	97
15°	972	967	935	919	916	274
25°	886	860	803	768	758	408
35°	768	723	643	593	577	481
45°	633	573	478	420	404	488
55°	487	413	318	268	252	435
65°	329	257	175	155	152	326
75°	171	114	88	83	82	182
85°	39	27	24	24	24	47
90°	0	0	0	0	0	



TEST NUMBER: P1056585

CATALOG NUMBER: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1029.8	1029.8	1029.8	1029.8	1029.8
2.5°	1024.5	1032.9	1026.0	1027.5	1029.1
5°	1019.9	1028.3	1019.1	1016.0	1019.9
7.5°	1012.2	1019.1	1003.8	996.9	999.9
10°	1001.5	1006.1	983.1	973.9	973.9
12.5°	988.4	988.4	960.8	947.8	947.8
15°	972.3	967.0	934.8	918.6	915.6
17.5°	953.9	944.0	905.6	884.9	881.1
20°	933.2	917.1	874.2	847.3	842.7
22.5°	910.2	889.5	839.7	806.7	801.3
25°	886.4	859.6	802.9	767.6	757.6
27.5°	859.6	827.4	765.3	725.4	713.1
30°	830.5	793.7	725.4	680.9	667.9
32.5°	800.6	759.2	684.8	637.2	622.7
35°	768.4	723.1	643.4	592.8	576.6
37.5°	736.1	687.1	602.7	549.8	532.9
40°	702.4	648.7	560.5	506.1	488.5
42.5°	668.7	611.2	519.1	463.9	445.5
45°	632.6	572.8	477.7	419.5	404.1
47.5°	598.1	533.7	437.1	380.3	363.5
50°	559.8	493.1	397.2	340.5	325.1
52.5°	524.5	453.2	357.3	304.4	288.3
55°	486.9	413.3	318.2	267.6	252.3
57.5°	447.8	373.4	280.7	233.1	218.5
60°	409.5	333.6	243.8	200.1	193.2
62.5°	370.4	296.0	209.3	175.6	171.0
65°	329.0	256.9	174.8	154.9	151.8
67.5°	289.9	219.3	147.2	135.7	132.7
70°	250.0	181.7	126.5	116.6	115.0
72.5°	210.9	145.7	106.6	99.7	98.2
75°	171.0	113.5	88.2	82.8	82.0
77.5°	134.2	85.1	69.8	67.5	65.9
80°	99.7	63.6	53.7	52.1	51.4
82.5°	68.2	43.7	38.3	38.3	36.8
85°	39.1	26.8	23.8	24.5	23.8
87.5°	14.6	11.5	10.7	11.5	11.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056585
 CATALOG NUMBER: S125R3DR-H610D850-X4F0-XX-UDD-FLL-W

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	19.72	18.55	20.04	20.35	14.57	16.11	14.93	16.42	16.73
	3H	19.97	21.35	20.35	21.68	22.04	16.04	17.43	16.42	17.75	18.12
	4H	20.62	21.92	21.02	22.27	22.65	16.63	17.93	17.03	18.28	18.66
	6H	21.10	22.30	21.51	22.67	23.06	17.10	18.30	17.51	18.66	19.05
	8H	21.25	22.40	21.68	22.79	23.19	17.26	18.40	17.68	18.79	19.19
	12H	21.35	22.45	21.78	22.83	23.26	17.37	18.47	17.80	18.85	19.28
4H	2H	18.32	19.62	18.72	19.97	20.34	15.24	16.54	15.64	16.89	17.27
	3H	20.29	21.37	20.70	21.77	22.17	16.92	18.00	17.33	18.40	18.80
	4H	21.04	22.01	21.47	22.42	22.86	17.62	18.60	18.06	19.01	19.45
	6H	21.63	22.48	22.09	22.92	23.38	18.21	19.06	18.67	19.50	19.96
	8H	21.84	22.63	22.30	23.07	23.54	18.42	19.21	18.88	19.65	20.12
	12H	21.98	22.69	22.46	23.17	23.64	18.58	19.29	19.06	19.77	20.24
8H	4H	21.10	21.89	21.56	22.34	22.80	17.99	18.78	18.45	19.23	19.69
	6H	21.76	22.41	22.25	22.90	23.38	18.69	19.35	19.19	19.84	20.31
	8H	22.01	22.60	22.52	23.11	23.60	18.97	19.56	19.49	20.07	20.56
	12H	22.22	22.74	22.73	23.23	23.80	19.22	19.74	19.72	20.23	20.79
12H	4H	21.09	21.80	21.57	22.28	22.75	18.04	18.75	18.52	19.22	19.69
	6H	21.75	22.34	22.27	22.85	23.34	18.76	19.35	19.27	19.86	20.35
	8H	22.05	22.57	22.56	23.06	23.62	19.10	19.63	19.61	20.12	20.68