

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: P242373

Luminaire Tested: S122RDRP-S485D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242373
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S485D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

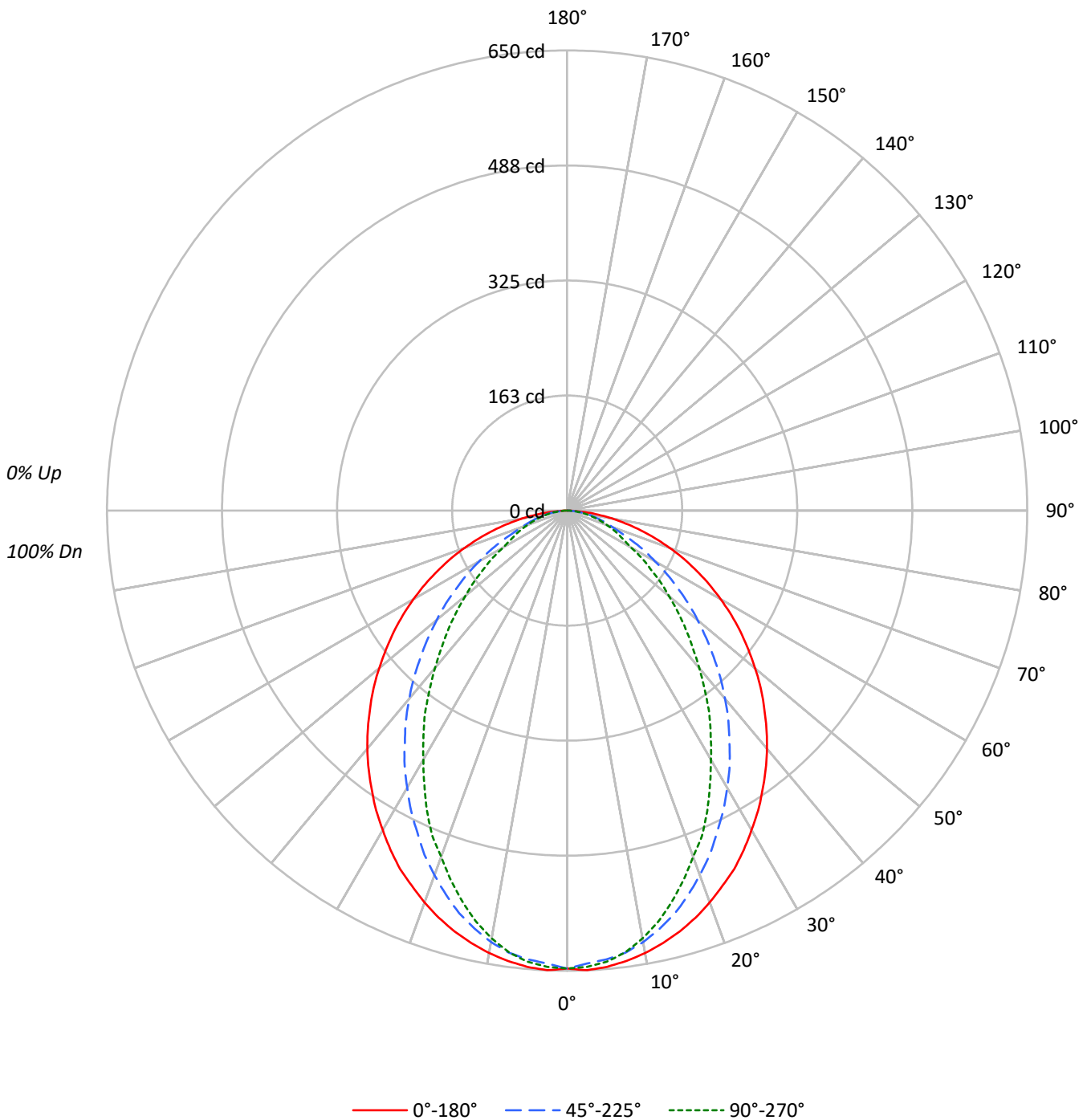
Lumens per Lamp: N/A
Luminaire Lumens: 1330.4 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	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	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	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°	12322	12322	12322
5°	12369	12166	12233
10°	12274	11969	11866
15°	12133	11613	11278
20°	11937	11106	10549
25°	11738	10532	9842
30°	11459	9939	8936
35°	11189	9297	8141
40°	10918	8631	7221
45°	10597	7885	6387
50°	10271	7130	5568
55°	9933	6320	4782
60°	9547	5463	3970
65°	9104	4593	3615
70°	8577	3781	3325
75°	7926	3444	3098
80°	6998	3082	2830
85°	5507	2426	2426

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10597 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	4.6
10°-20°	166.4	12.5
20°-30°	233.7	17.6
30°-40°	254.7	19.1
40°-50°	234.1	17.6
50°-60°	183.8	13.8
60°-70°	119.7	9.0
70°-80°	61.6	4.6
80°-90°	15.7	1.2
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°	460.7	34.6
0°-40°	715.4	53.8
0°-60°	1133.4	85.2
0°-90°	1330.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1330.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	647	647	647	647	647	
5°	647	644	636	642	640	61
15°	615	609	589	578	572	173
25°	558	540	501	477	468	257
35°	481	451	400	363	350	301
45°	393	354	293	251	237	304
55°	299	254	190	155	144	267
65°	202	154	102	82	80	200
75°	108	67	47	43	42	114
85°	25	13	11	11	11	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	646.9	646.9	646.9	646.9	646.9
2.5°	649.8	646.9	640.4	646.3	645.1
5°	646.9	643.9	636.3	641.6	639.8
7.5°	641.6	638.1	629.9	632.2	629.3
10°	634.6	630.5	618.8	617.0	613.5
12.5°	625.8	620.5	604.7	601.2	594.8
15°	615.3	608.8	588.9	577.8	571.9
17.5°	603.0	593.6	569.0	556.1	546.8
20°	588.9	577.2	547.9	533.3	520.4
22.5°	573.7	560.2	526.3	506.4	497.6
25°	558.5	539.7	501.1	477.1	468.3
27.5°	540.3	520.4	477.7	450.2	436.7
30°	521.0	498.8	451.9	422.1	406.3
32.5°	502.3	475.3	427.3	392.2	377.6
35°	481.2	451.3	399.8	363.0	350.1
37.5°	460.7	428.5	374.1	333.7	319.0
40°	439.1	403.9	347.1	305.6	290.4
42.5°	416.8	379.3	320.2	276.9	262.3
45°	393.4	354.2	292.7	251.1	237.1
47.5°	371.1	329.6	266.4	224.8	211.9
50°	346.6	305.0	240.6	200.2	187.9
52.5°	322.6	278.7	216.0	177.4	166.3
55°	299.1	253.5	190.3	155.1	144.0
57.5°	275.1	228.3	167.4	134.6	125.3
60°	250.6	203.7	143.4	113.6	104.2
62.5°	226.6	179.7	122.9	94.8	90.2
65°	202.0	154.5	101.9	82.0	80.2
67.5°	178.5	131.1	82.0	72.0	70.2
70°	154.0	108.3	67.9	62.1	59.7
72.5°	130.5	87.2	56.8	52.1	50.9
75°	107.7	66.7	46.8	42.7	42.1
77.5°	84.9	47.4	36.9	34.5	33.4
80°	63.8	34.0	28.1	25.8	25.8
82.5°	44.5	22.8	19.3	18.1	18.1
85°	25.2	12.9	11.1	11.1	11.1
87.5°	9.4	4.7	4.7	4.1	4.1
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	19.96	21.48	20.32	21.79	22.11	15.92	17.44	16.28	17.75	18.07
	3H	21.72	23.09	22.10	23.42	23.78	17.18	18.55	17.56	18.88	19.24
	4H	22.39	23.67	22.79	24.02	24.40	17.69	18.97	18.09	19.31	19.69
	6H	22.88	24.06	23.29	24.43	24.82	18.07	19.25	18.48	19.62	20.01
	8H	23.05	24.17	23.47	24.56	24.96	18.19	19.32	18.62	19.71	20.11
	12H	23.15	24.23	23.58	24.61	25.04	18.27	19.35	18.70	19.73	20.16
4H	2H	20.06	21.34	20.46	21.69	22.07	16.62	17.90	17.01	18.24	18.62
	3H	22.00	23.06	22.41	23.46	23.86	18.06	19.12	18.47	19.52	19.92
	4H	22.75	23.70	23.18	24.12	24.56	18.66	19.61	19.09	20.03	20.47
	6H	23.34	24.17	23.80	24.61	25.07	19.15	19.98	19.60	20.42	20.88
	8H	23.55	24.33	24.02	24.77	25.24	19.31	20.09	19.77	20.53	21.00
	12H	23.71	24.40	24.19	24.88	25.35	19.42	20.12	19.91	20.60	21.07
8H	4H	22.77	23.55	23.23	23.99	24.46	19.01	19.79	19.47	20.23	20.70
	6H	23.41	24.05	23.90	24.54	25.02	19.60	20.24	20.10	20.73	21.21
	8H	23.66	24.24	24.17	24.74	25.23	19.82	20.40	20.33	20.91	21.39
	12H	23.86	24.37	24.37	24.87	25.43	20.00	20.51	20.51	21.00	21.56
12H	4H	22.75	23.45	23.24	23.93	24.40	19.05	19.75	19.54	20.23	20.70
	6H	23.39	23.97	23.90	24.48	24.96	19.66	20.24	20.18	20.75	21.24
	8H	23.67	24.18	24.18	24.68	25.24	19.93	20.44	20.44	20.94	21.50