

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: P242383

Luminaire Tested: S122RDRP-S485D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242383
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-S485D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

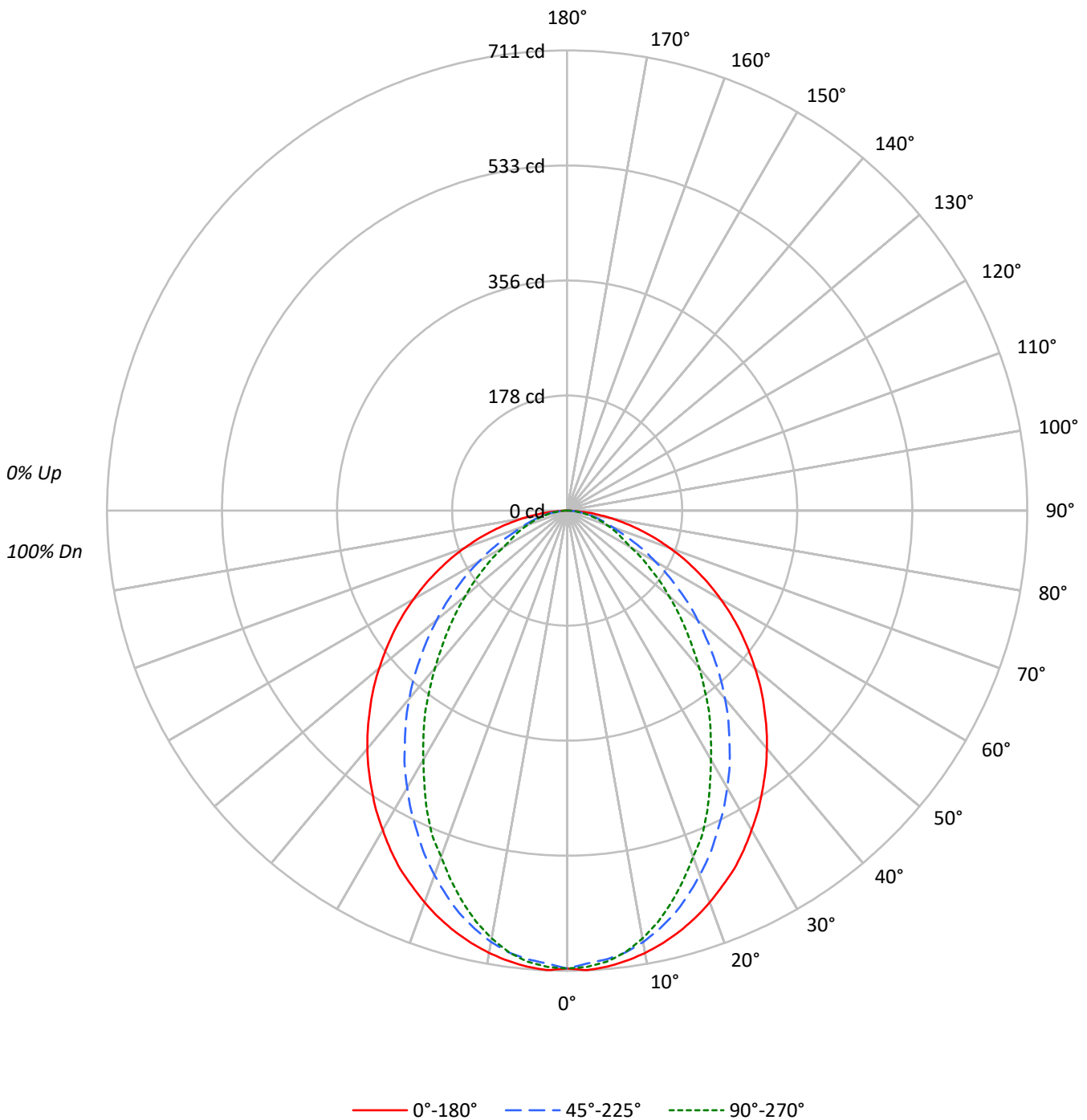
Lumens per Lamp: N/A
Luminaire Lumens: 1455.1 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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°	13476	13476	13476
5°	13528	13308	13381
10°	13425	13090	12978
15°	13269	12701	12335
20°	13056	12148	11538
25°	12837	11519	10765
30°	12532	10872	9772
35°	12238	10169	8904
40°	11940	9441	7897
45°	11591	8623	6985
50°	11231	7799	6090
55°	10866	6911	5230
60°	10438	5977	4343
65°	9956	5021	3953
70°	9378	4138	3637
75°	8669	3768	3393
80°	7656	3368	3093
85°	6010	2666	2666

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11591 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	4.6
10°-20°	182.0	12.5
20°-30°	255.6	17.6
30°-40°	278.6	19.1
40°-50°	256.0	17.6
50°-60°	201.1	13.8
60°-70°	130.9	9.0
70°-80°	67.4	4.6
80°-90°	17.2	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°	503.9	34.6
0°-40°	782.5	53.8
0°-60°	1239.6	85.2
0°-90°	1455.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1455.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	708	704	696	702	700	67
15°	673	666	644	632	626	190
25°	611	590	548	522	512	281
35°	526	494	437	397	383	329
45°	430	387	320	275	259	332
55°	327	277	208	170	158	292
65°	221	169	111	90	88	219
75°	118	73	51	47	46	125
85°	28	14	12	12	12	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	707.5	707.5	707.5	707.5	707.5
2.5°	710.7	707.5	700.5	706.9	705.6
5°	707.5	704.3	696.0	701.7	699.8
7.5°	701.7	697.9	688.9	691.5	688.3
10°	694.1	689.6	676.8	674.8	671.0
12.5°	684.4	678.7	661.4	657.6	650.5
15°	672.9	665.9	644.1	631.9	625.5
17.5°	659.5	649.2	622.3	608.3	598.0
20°	644.1	631.3	599.3	583.3	569.2
22.5°	627.5	612.7	575.6	553.8	544.2
25°	610.8	590.3	548.1	521.8	512.2
27.5°	591.0	569.2	522.5	492.4	477.6
30°	569.8	545.5	494.3	461.6	444.3
32.5°	549.4	519.9	467.4	429.0	413.0
35°	526.3	493.6	437.3	397.0	382.9
37.5°	503.9	468.7	409.1	365.0	348.9
40°	480.2	441.8	379.7	334.2	317.6
42.5°	455.9	414.9	350.2	302.8	286.8
45°	430.3	387.4	320.1	274.7	259.3
47.5°	405.9	360.5	291.3	245.9	231.8
50°	379.0	333.6	263.2	219.0	205.5
52.5°	352.8	304.8	236.3	194.0	181.8
55°	327.2	277.2	208.1	169.7	157.5
57.5°	300.9	249.7	183.1	147.3	137.0
60°	274.0	222.8	156.9	124.2	114.0
62.5°	247.8	196.6	134.5	103.7	98.6
65°	220.9	169.0	111.4	89.6	87.7
67.5°	195.3	143.4	89.6	78.8	76.8
70°	168.4	118.5	74.3	67.9	65.3
72.5°	142.8	95.4	62.1	57.0	55.7
75°	117.8	73.0	51.2	46.7	46.1
77.5°	92.8	51.9	40.3	37.8	36.5
80°	69.8	37.1	30.7	28.2	28.2
82.5°	48.7	25.0	21.1	19.8	19.8
85°	27.5	14.1	12.2	12.2	12.2
87.5°	10.2	5.1	5.1	4.5	4.5
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	20.27	21.79	20.64	22.11	22.42	16.23	17.75	16.60	18.07	18.38
	3H	22.04	23.40	22.41	23.73	24.09	17.50	18.86	17.88	19.19	19.55
	4H	22.70	23.98	23.10	24.33	24.71	18.00	19.28	18.40	19.63	20.01
	6H	23.19	24.37	23.60	24.74	25.13	18.38	19.56	18.79	19.93	20.32
	8H	23.36	24.48	23.78	24.87	25.27	18.50	19.63	18.93	20.02	20.42
	12H	23.46	24.54	23.89	24.92	25.35	18.59	19.66	19.02	20.05	20.48
4H	2H	20.37	21.66	20.77	22.00	22.38	16.93	18.21	17.33	18.56	18.94
	3H	22.31	23.37	22.72	23.77	24.17	18.37	19.43	18.78	19.83	20.24
	4H	23.06	24.01	23.49	24.43	24.87	18.97	19.93	19.40	20.34	20.78
	6H	23.65	24.48	24.11	24.92	25.38	19.46	20.29	19.92	20.73	21.19
	8H	23.86	24.64	24.33	25.09	25.55	19.62	20.40	20.08	20.84	21.31
	12H	24.02	24.71	24.50	25.19	25.66	19.74	20.43	20.22	20.91	21.38
8H	4H	23.08	23.86	23.55	24.30	24.77	19.32	20.10	19.79	20.55	21.01
	6H	23.72	24.36	24.22	24.85	25.33	19.91	20.55	20.41	21.04	21.52
	8H	23.97	24.55	24.48	25.06	25.54	20.13	20.71	20.65	21.22	21.71
	12H	24.17	24.68	24.68	25.18	25.74	20.31	20.82	20.82	21.31	21.88
12H	4H	23.07	23.76	23.55	24.24	24.71	19.37	20.06	19.85	20.54	21.01
	6H	23.70	24.28	24.21	24.79	25.28	19.97	20.55	20.49	21.06	21.55
	8H	23.99	24.50	24.49	24.99	25.55	20.25	20.76	20.76	21.25	21.81