

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: P242716

Luminaire Tested: S124RDRP-S350D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242716
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S350D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

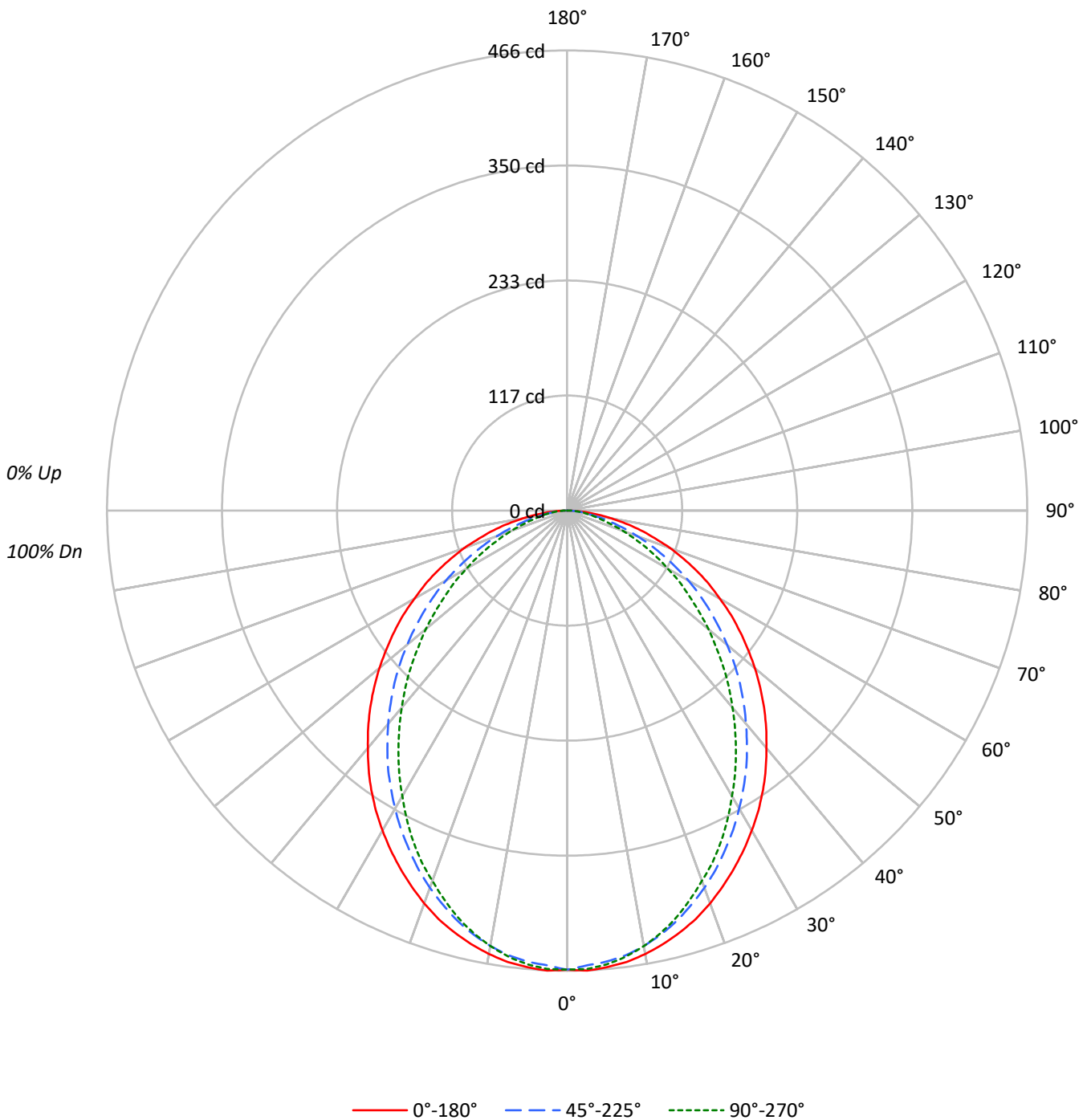
Lumens per Lamp: N/A
Luminaire Lumens: 1074.2 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4132	4132	4132
5°	4142	4091	4116
10°	4116	4042	4042
15°	4068	3957	3928
20°	4004	3845	3775
25°	3921	3715	3620
30°	3840	3577	3427
35°	3751	3434	3234
40°	3644	3271	3024
45°	3544	3110	2811
50°	3431	2925	2585
55°	3310	2731	2339
60°	3177	2519	2089
65°	3054	2253	1842
70°	2877	1962	1565
75°	2651	1624	1271
80°	2314	1239	1167
85°	1958	1122	1050

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3544 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	4.1
10°-20°	121.9	11.3
20°-30°	176.0	16.4
30°-40°	199.4	18.6
40°-50°	192.6	17.9
50°-60°	160.1	14.9
60°-70°	110.5	10.3
70°-80°	55.8	5.2
80°-90°	14.2	1.3
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°	341.6	31.8
0°-40°	541.0	50.4
0°-60°	893.7	83.2
0°-90°	1074.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1074.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	465	465	465	465	465	
5°	464	463	458	462	461	44
15°	442	439	430	429	427	125
25°	400	393	379	373	369	184
35°	346	334	316	304	298	216
45°	282	269	247	230	224	217
55°	214	199	176	158	151	191
65°	145	130	107	92	88	143
75°	77	64	47	39	37	81
85°	19	12	11	10	10	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	464.9	464.9	464.9	464.9	464.9
2.5°	466.3	464.9	461.0	464.9	464.6
5°	464.2	462.8	458.5	462.1	461.3
7.5°	461.0	459.6	454.2	456.7	455.7
10°	456.0	454.2	447.8	449.2	447.8
12.5°	449.6	447.5	439.6	440.3	438.2
15°	442.1	438.9	430.0	429.3	426.8
17.5°	433.6	429.0	418.6	416.9	413.3
20°	423.3	418.6	406.5	403.7	399.1
22.5°	411.9	406.5	393.4	388.7	385.2
25°	399.8	393.4	378.8	372.7	369.1
27.5°	387.3	379.5	364.2	357.0	352.1
30°	374.1	365.2	348.5	339.6	333.9
32.5°	360.3	349.9	332.5	321.8	316.5
35°	345.7	334.3	316.5	304.4	298.0
37.5°	330.3	318.6	299.0	285.9	279.4
40°	314.0	302.2	281.9	267.0	260.6
42.5°	298.3	285.9	264.5	249.2	242.4
45°	281.9	268.8	247.4	230.0	223.6
47.5°	265.2	251.7	229.6	211.5	204.3
50°	248.1	234.2	211.5	193.7	186.9
52.5°	230.7	217.1	193.7	175.5	168.4
55°	213.6	199.3	176.2	157.7	150.9
57.5°	196.9	181.9	159.1	140.3	135.3
60°	178.7	164.5	141.7	123.2	117.5
62.5°	162.3	147.4	123.9	107.1	102.9
65°	145.2	129.9	107.1	91.8	87.6
67.5°	127.4	112.8	91.5	78.0	73.0
70°	110.7	95.8	75.5	63.7	60.2
72.5°	92.9	79.7	60.9	51.3	48.1
75°	77.2	64.1	47.3	39.2	37.0
77.5°	60.9	49.5	35.2	29.5	28.8
80°	45.2	34.9	24.2	23.1	22.8
82.5°	31.7	22.4	17.4	16.7	16.4
85°	19.2	12.1	11.0	10.3	10.3
87.5°	8.2	5.3	5.0	4.6	5.0
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	16.27	17.84	16.64	18.15	18.47	14.31	15.87	14.67	16.19	16.50
	3H	18.04	19.45	18.42	19.78	20.14	15.56	16.97	15.94	17.30	17.66
	4H	18.70	20.03	19.10	20.37	20.75	15.94	17.26	16.33	17.61	17.98
	6H	19.18	20.40	19.59	20.77	21.16	16.20	17.42	16.61	17.79	18.18
	8H	19.33	20.50	19.75	20.88	21.28	16.29	17.46	16.72	17.85	18.25
	12H	19.43	20.54	19.86	20.93	21.35	16.35	17.47	16.78	17.85	18.28
4H	2H	16.61	17.93	17.01	18.28	18.66	15.00	16.32	15.40	16.67	17.05
	3H	18.58	19.68	18.99	20.08	20.48	16.43	17.54	16.84	17.93	18.34
	4H	19.36	20.35	19.79	20.76	21.20	16.89	17.88	17.32	18.30	18.73
	6H	19.95	20.82	20.41	21.26	21.72	17.24	18.10	17.69	18.54	19.00
	8H	20.15	20.96	20.61	21.40	21.87	17.36	18.17	17.82	18.61	19.08
	12H	20.29	21.01	20.77	21.49	21.96	17.46	18.18	17.94	18.66	19.13
8H	4H	19.45	20.26	19.91	20.70	21.17	17.20	18.01	17.66	18.45	18.92
	6H	20.12	20.79	20.62	21.28	21.76	17.63	18.30	18.13	18.79	19.27
	8H	20.37	20.97	20.88	21.47	21.96	17.81	18.41	18.32	18.92	19.41
	12H	20.56	21.09	21.07	21.58	22.15	17.97	18.50	18.48	18.99	19.55
12H	4H	19.44	20.17	19.92	20.64	21.11	17.24	17.96	17.72	18.44	18.91
	6H	20.11	20.71	20.63	21.22	21.71	17.68	18.29	18.20	18.79	19.28
	8H	20.39	20.93	20.90	21.42	21.98	17.91	18.44	18.42	18.94	19.50