

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: P243576

Luminaire Tested: S124RDRP-H350D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243576
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H350D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

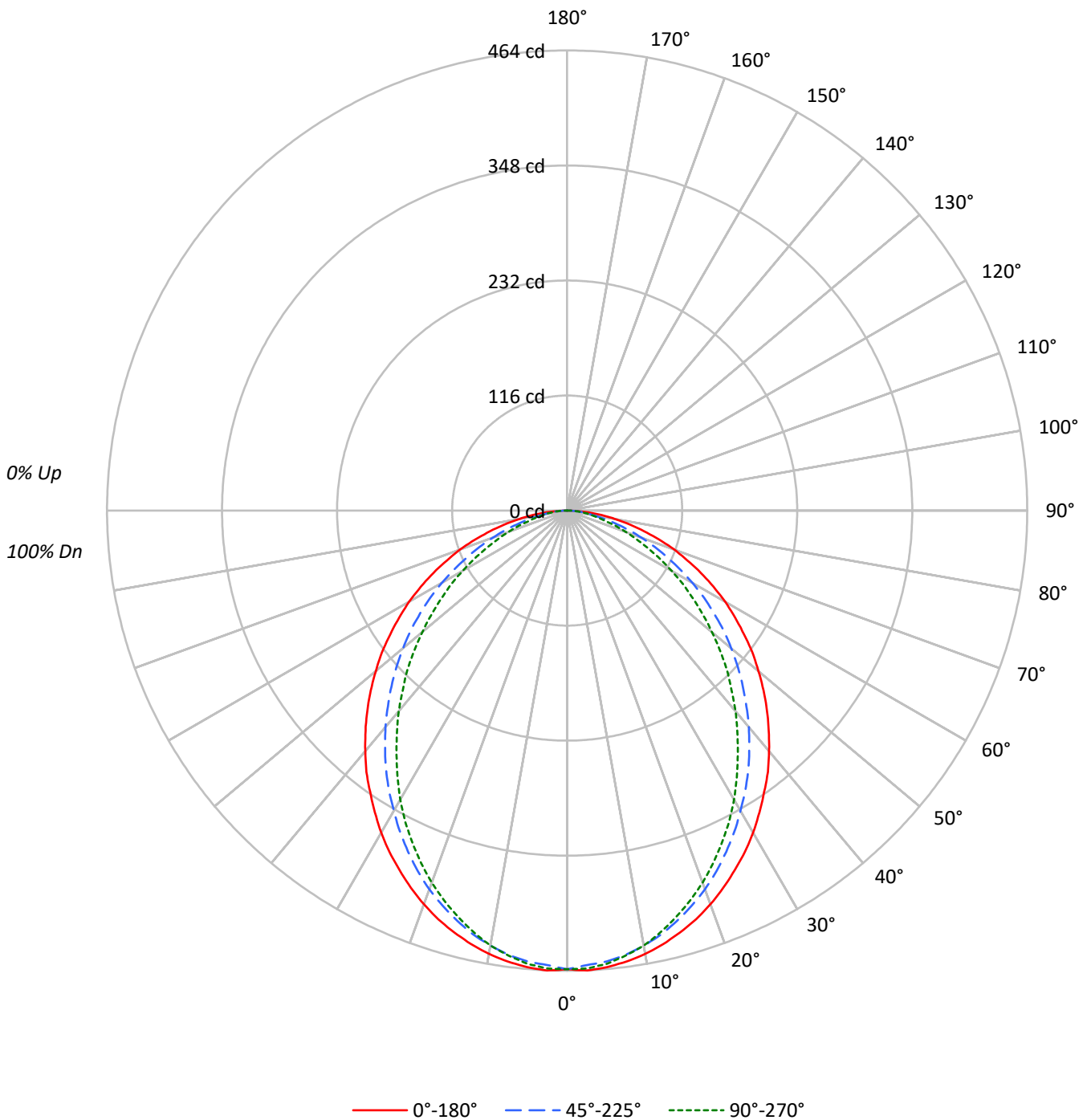
Lumens per Lamp: N/A
Luminaire Lumens: 1090.6 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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: P243576

CATALOG NUMBER: S124RDRP-H350D930-X4F0-XX-UDD-F-W

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	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4111	4111	4111
5°	4123	4072	4093
10°	4097	4020	4020
15°	4052	3941	3904
20°	3997	3845	3777
25°	3923	3722	3622
30°	3850	3587	3454
35°	3759	3455	3255
40°	3675	3307	3066
45°	3583	3149	2866
50°	3483	2987	2634
55°	3375	2803	2402
60°	3271	2590	2160
65°	3130	2341	1889
70°	2981	2066	1640
75°	2754	1724	1336
80°	2513	1346	1223
85°	2223	1285	1214

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3583 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	4.0
10°-20°	121.5	11.1
20°-30°	176.1	16.2
30°-40°	200.7	18.4
40°-50°	195.3	17.9
50°-60°	164.1	15.0
60°-70°	114.3	10.5
70°-80°	59.0	5.4
80°-90°	16.0	1.5
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°	341.1	31.3
0°-40°	541.8	49.7
0°-60°	901.2	82.6
0°-90°	1090.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1090.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	462	461	456	460	459	44
15°	440	437	428	428	424	124
25°	400	392	380	374	369	184
35°	346	336	318	306	300	217
45°	285	271	250	234	228	220
55°	218	204	181	162	155	195
65°	149	134	111	95	90	147
75°	80	68	50	42	39	85
85°	22	14	13	12	12	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	462.5	462.5	462.5	462.5	462.5
2.5°	464.2	462.8	458.7	462.5	462.1
5°	462.1	460.8	456.3	459.7	458.7
7.5°	458.7	457.0	451.9	454.3	452.6
10°	453.9	452.2	445.4	447.1	445.4
12.5°	447.8	445.4	437.9	438.2	435.5
15°	440.3	436.9	428.3	427.7	424.2
17.5°	432.1	427.7	417.8	416.1	412.3
20°	422.5	417.1	406.5	402.7	399.3
22.5°	411.6	405.1	393.5	389.1	384.7
25°	400.0	392.5	379.5	374.1	369.3
27.5°	388.1	379.2	365.2	358.4	353.6
30°	375.1	364.9	349.5	341.7	336.5
32.5°	360.8	350.5	334.5	324.9	318.4
35°	346.4	335.8	318.4	306.5	300.0
37.5°	332.4	320.5	301.7	289.4	281.9
40°	316.7	304.1	285.0	271.0	264.2
42.5°	301.0	288.1	267.6	252.9	245.4
45°	285.0	271.3	250.5	234.5	228.0
47.5°	268.6	255.0	233.5	216.7	209.2
50°	251.9	238.2	216.0	197.6	190.5
52.5°	235.5	221.2	199.0	180.2	172.7
55°	217.8	203.8	180.9	162.5	155.0
57.5°	200.7	186.0	163.8	145.1	138.9
60°	184.0	169.3	145.7	127.6	121.5
62.5°	166.2	151.5	128.3	110.9	105.5
65°	148.8	134.5	111.3	95.2	89.8
67.5°	131.1	118.1	95.6	80.2	75.8
70°	114.7	100.0	79.5	66.2	63.1
72.5°	97.3	84.3	64.5	53.6	51.2
75°	80.2	67.9	50.2	42.0	38.9
77.5°	64.5	52.6	37.9	31.1	31.1
80°	49.1	38.6	26.3	24.6	23.9
82.5°	34.8	24.9	19.5	18.1	17.7
85°	21.8	14.0	12.6	11.9	11.9
87.5°	10.6	6.5	6.5	6.1	6.1
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	16.36	17.94	16.73	18.25	18.57	14.47	16.04	14.83	16.36	16.67
	3H	18.18	19.60	18.56	19.92	20.29	15.73	17.15	16.11	17.48	17.84
	4H	18.86	20.20	19.26	20.54	20.92	16.13	17.46	16.52	17.81	18.18
	6H	19.38	20.61	19.79	20.97	21.37	16.40	17.64	16.82	18.00	18.39
	8H	19.55	20.72	19.97	21.11	21.51	16.51	17.68	16.93	18.07	18.47
	12H	19.66	20.79	20.09	21.17	21.60	16.58	17.71	17.01	18.09	18.52
4H	2H	16.71	18.05	17.11	18.40	18.77	15.17	16.50	15.57	16.85	17.23
	3H	18.73	19.84	19.14	20.24	20.64	16.62	17.73	17.03	18.13	18.53
	4H	19.54	20.54	19.97	20.96	21.40	17.10	18.10	17.53	18.52	18.95
	6H	20.18	21.06	20.64	21.50	21.96	17.46	18.34	17.92	18.78	19.24
	8H	20.40	21.22	20.86	21.66	22.13	17.60	18.42	18.06	18.86	19.33
	12H	20.57	21.30	21.05	21.78	22.25	17.72	18.45	18.20	18.93	19.40
8H	4H	19.65	20.47	20.11	20.91	21.38	17.43	18.25	17.89	18.69	19.16
	6H	20.37	21.05	20.87	21.54	22.02	17.88	18.56	18.38	19.05	19.52
	8H	20.65	21.25	21.16	21.76	22.25	18.08	18.68	18.59	19.19	19.68
	12H	20.87	21.41	21.38	21.90	22.47	18.26	18.80	18.77	19.29	19.85
12H	4H	19.64	20.37	20.12	20.85	21.32	17.48	18.21	17.96	18.68	19.15
	6H	20.37	20.98	20.88	21.48	21.97	17.95	18.55	18.46	19.06	19.55
	8H	20.68	21.22	21.19	21.71	22.27	18.19	18.73	18.70	19.22	19.78