

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: P242711

Luminaire Tested: S124RDRP-S350D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242711
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-S350D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

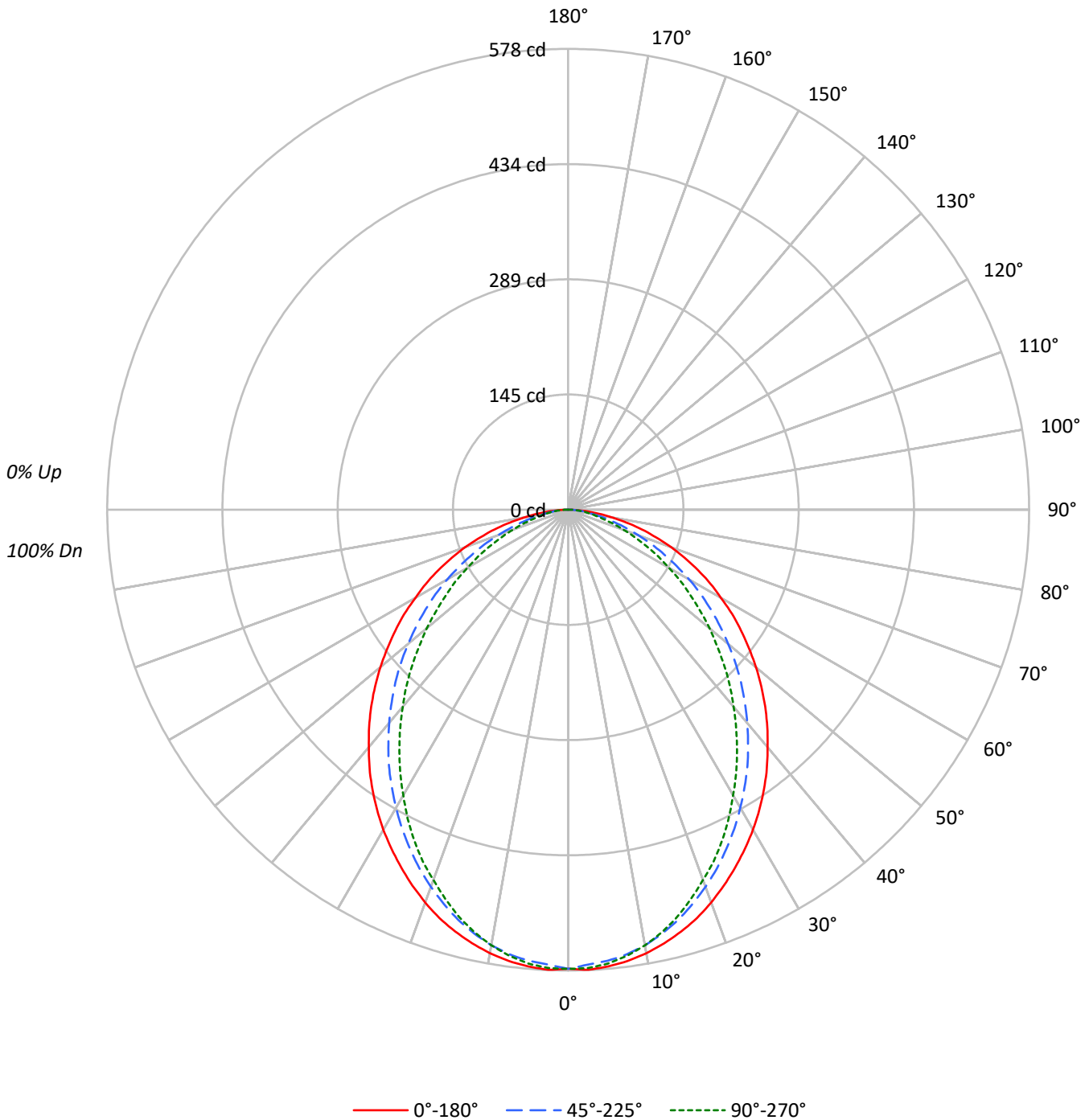
Lumens per Lamp: N/A
Luminaire Lumens: 1330.6 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85				85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72				72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62				62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54				54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47				47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41				41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37				37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33				33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30				30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27				27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5119	5119	5119
5°	5131	5067	5099
10°	5098	5007	5007
15°	5039	4901	4865
20°	4960	4763	4676
25°	4857	4602	4484
30°	4756	4431	4245
35°	4645	4254	4005
40°	4513	4052	3746
45°	4390	3852	3481
50°	4250	3622	3201
55°	4101	3383	2898
60°	3934	3120	2587
65°	3784	2791	2282
70°	3563	2430	1936
75°	3287	2013	1576
80°	2867	1536	1444
85°	2427	1397	1305

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4390 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.1	4.1
10°-20°	151.0	11.3
20°-30°	218.0	16.4
30°-40°	247.0	18.6
40°-50°	238.5	17.9
50°-60°	198.3	14.9
60°-70°	136.9	10.3
70°-80°	69.2	5.2
80°-90°	17.6	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°	423.1	31.8
0°-40°	670.1	50.4
0°-60°	1107.0	83.2
0°-90°	1330.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1330.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	576	576	576	576	576	
5°	575	573	568	572	571	55
15°	548	544	533	532	529	154
25°	495	487	469	462	457	228
35°	428	414	392	377	369	268
45°	349	333	306	285	277	269
55°	265	247	218	195	187	237
65°	180	161	133	114	108	178
75°	96	79	59	48	46	101
85°	24	15	14	13	13	28
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	575.9	575.9	575.9	575.9	575.9
2.5°	577.6	575.9	571.0	575.9	575.4
5°	575.0	573.2	567.9	572.3	571.4
7.5°	571.0	569.2	562.6	565.7	564.4
10°	564.8	562.6	554.7	556.5	554.7
12.5°	556.9	554.2	544.5	545.4	542.8
15°	547.6	543.7	532.6	531.8	528.7
17.5°	537.1	531.3	518.5	516.3	511.9
20°	524.3	518.5	503.5	500.0	494.3
22.5°	510.2	503.5	487.2	481.5	477.1
25°	495.2	487.2	469.2	461.7	457.2
27.5°	479.7	470.0	451.1	442.3	436.1
30°	463.4	452.4	431.7	420.6	413.6
32.5°	446.2	433.4	411.8	398.6	392.0
35°	428.1	414.0	392.0	377.0	369.1
37.5°	409.2	394.6	370.4	354.1	346.1
40°	388.9	374.4	349.2	330.7	322.8
42.5°	369.5	354.1	327.6	308.7	300.3
45°	349.2	332.9	306.4	284.8	276.9
47.5°	328.5	311.7	284.4	261.9	253.1
50°	307.3	290.1	261.9	239.9	231.5
52.5°	285.7	269.0	239.9	217.4	208.6
55°	264.6	246.9	218.3	195.3	187.0
57.5°	243.8	225.3	197.1	173.7	167.6
60°	221.3	203.7	175.5	152.6	145.5
62.5°	201.1	182.5	153.4	132.7	127.4
65°	179.9	160.9	132.7	113.8	108.5
67.5°	157.9	139.8	113.3	96.6	90.4
70°	137.1	118.6	93.5	78.9	74.5
72.5°	115.1	98.8	75.4	63.5	59.5
75°	95.7	79.4	58.6	48.5	45.9
77.5°	75.4	61.3	43.7	36.6	35.7
80°	56.0	43.2	30.0	28.7	28.2
82.5°	39.2	27.8	21.6	20.7	20.3
85°	23.8	15.0	13.7	12.8	12.8
87.5°	10.1	6.6	6.2	5.7	6.2
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	17.02	18.58	17.38	18.90	19.21	15.05	16.61	15.41	16.93	17.24
	3H	18.79	20.20	19.16	20.52	20.88	16.30	17.71	16.68	18.04	18.40
	4H	19.45	20.77	19.85	21.12	21.50	16.68	18.00	17.08	18.35	18.73
	6H	19.92	21.15	20.34	21.51	21.90	16.94	18.16	17.35	18.53	18.92
	8H	20.07	21.24	20.50	21.63	22.03	17.03	18.20	17.46	18.59	18.99
	12H	20.17	21.29	20.60	21.67	22.10	17.10	18.21	17.53	18.59	19.02
4H	2H	17.35	18.68	17.75	19.02	19.40	15.74	17.06	16.14	17.41	17.79
	3H	19.32	20.42	19.73	20.82	21.22	17.18	18.28	17.59	18.68	19.08
	4H	20.10	21.09	20.53	21.51	21.95	17.63	18.62	18.06	19.04	19.47
	6H	20.70	21.56	21.15	22.01	22.46	17.98	18.84	18.43	19.29	19.74
	8H	20.89	21.70	21.35	22.14	22.61	18.10	18.91	18.57	19.36	19.82
	12H	21.03	21.75	21.51	22.23	22.70	18.20	18.93	18.68	19.40	19.87
8H	4H	20.20	21.00	20.66	21.45	21.91	17.94	18.75	18.41	19.20	19.66
	6H	20.87	21.54	21.36	22.03	22.50	18.38	19.04	18.87	19.53	20.01
	8H	21.11	21.71	21.62	22.22	22.71	18.56	19.16	19.07	19.66	20.15
	12H	21.31	21.84	21.81	22.33	22.89	18.71	19.24	19.22	19.73	20.30
12H	4H	20.19	20.91	20.67	21.39	21.86	17.98	18.71	18.46	19.18	19.65
	6H	20.86	21.46	21.37	21.97	22.45	18.43	19.03	18.94	19.54	20.02
	8H	21.14	21.67	21.65	22.16	22.72	18.66	19.19	19.17	19.68	20.24