

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: P242720

Luminaire Tested: S124RDRP-S1195D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242720
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-S1195D930-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

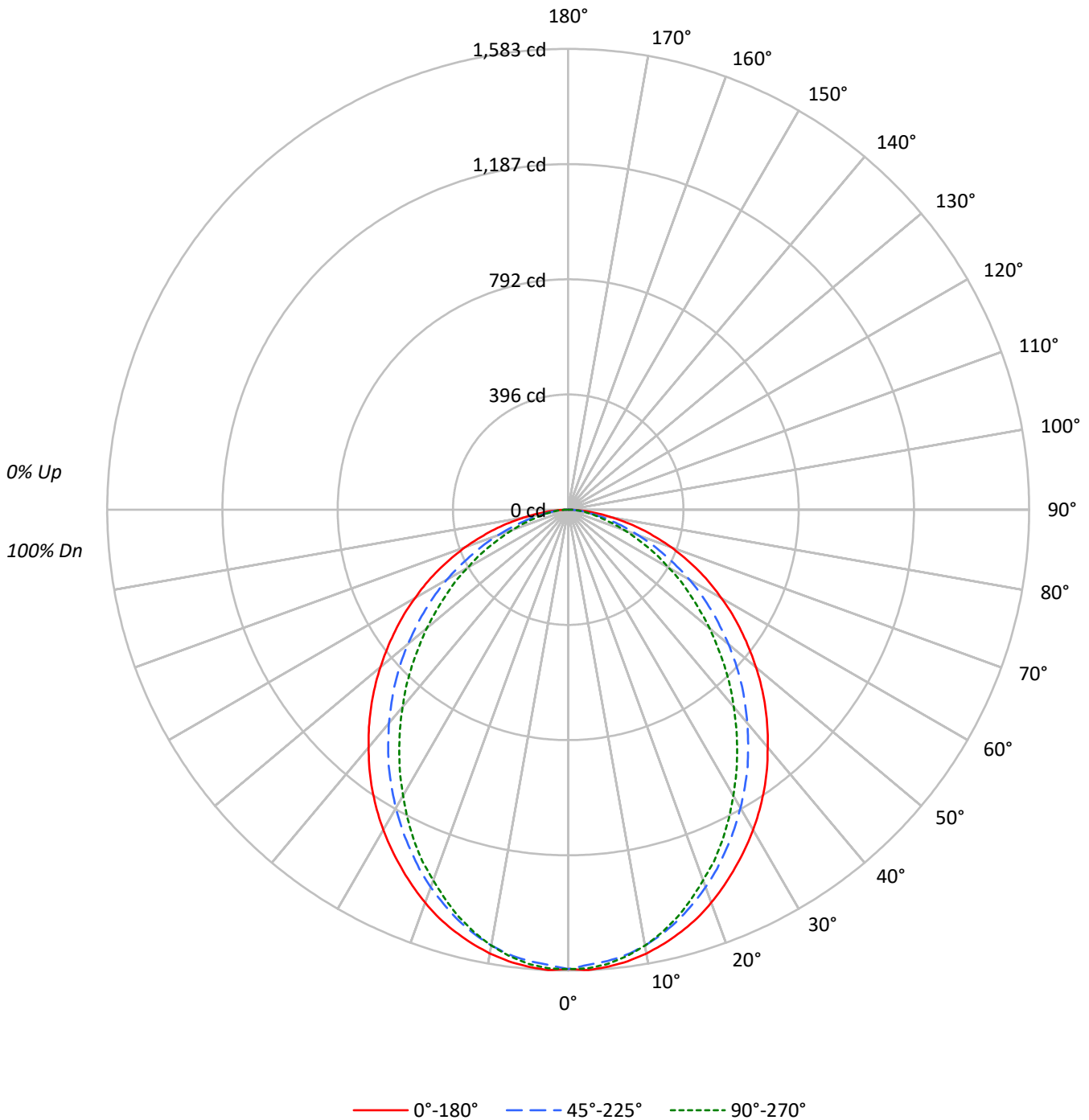
Lumens per Lamp: N/A
Luminaire Lumens: 3646.3 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	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°	14028	14028	14028
5°	14060	13887	13973
10°	13971	13720	13720
15°	13811	13433	13333
20°	13590	13053	12813
25°	13309	12610	12289
30°	13035	12142	11633
35°	12732	11657	10975
40°	12367	11105	10263
45°	12030	10557	9539
50°	11647	9926	8773
55°	11236	9269	7939
60°	10784	8549	7090
65°	10369	7650	6253
70°	9767	6658	5307
75°	9005	5519	4317
80°	7858	4208	3957
85°	6660	3825	3570

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12030 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	4.1
10°-20°	413.8	11.3
20°-30°	597.4	16.4
30°-40°	677.0	18.6
40°-50°	653.7	17.9
50°-60°	543.4	14.9
60°-70°	375.1	10.3
70°-80°	189.5	5.2
80°-90°	48.1	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°	1159.5	31.8
0°-40°	1836.5	50.4
0°-60°	3033.6	83.2
0°-90°	3646.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3646.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1578	1578	1578	1578	1578	
5°	1576	1571	1556	1568	1566	150
15°	1501	1490	1460	1457	1449	423
25°	1357	1335	1286	1265	1253	625
35°	1173	1135	1074	1033	1011	733
45°	957	912	840	781	759	738
55°	725	677	598	535	512	649
65°	493	441	364	312	297	487
75°	262	218	161	133	126	277
85°	65	41	38	35	35	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1578.1	1578.1	1578.1	1578.1	1578.1
2.5°	1582.9	1578.1	1564.8	1578.1	1576.9
5°	1575.7	1570.8	1556.3	1568.4	1566.0
7.5°	1564.8	1560.0	1541.8	1550.3	1546.7
10°	1547.9	1541.8	1520.1	1524.9	1520.1
12.5°	1526.1	1518.9	1492.3	1494.7	1487.5
15°	1500.8	1489.9	1459.7	1457.3	1448.8
17.5°	1471.8	1456.0	1421.0	1415.0	1402.9
20°	1436.7	1421.0	1379.9	1370.3	1354.5
22.5°	1398.0	1379.9	1335.2	1319.5	1307.4
25°	1357.0	1335.2	1285.7	1265.1	1253.0
27.5°	1314.7	1288.1	1236.1	1212.0	1195.0
30°	1270.0	1239.8	1183.0	1152.8	1133.4
32.5°	1222.8	1187.8	1128.6	1092.3	1074.2
35°	1173.3	1134.6	1074.2	1033.1	1011.4
37.5°	1121.3	1081.5	1015.0	970.3	948.5
40°	1065.8	1025.9	957.0	906.3	884.5
42.5°	1012.6	970.3	897.8	845.8	822.9
45°	957.0	912.3	839.8	780.6	758.8
47.5°	900.2	854.3	779.4	717.8	693.6
50°	842.2	795.1	717.8	657.3	634.4
52.5°	783.0	737.1	657.3	595.7	571.5
55°	725.0	676.7	598.1	535.3	512.3
57.5°	668.2	617.5	540.1	476.1	459.2
60°	606.6	558.3	480.9	418.1	398.8
62.5°	551.0	500.3	420.5	363.7	349.2
65°	493.0	441.0	363.7	311.8	297.3
67.5°	432.6	383.0	310.5	264.6	247.7
70°	375.8	325.0	256.2	216.3	204.2
72.5°	315.4	270.7	206.6	174.0	163.1
75°	262.2	217.5	160.7	132.9	125.7
77.5°	206.6	168.0	119.6	100.3	97.9
80°	153.5	118.4	82.2	78.5	77.3
82.5°	107.5	76.1	59.2	56.8	55.6
85°	65.3	41.1	37.5	35.0	35.0
87.5°	27.8	18.1	16.9	15.7	16.9
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	20.52	22.09	20.88	22.40	22.71	18.55	20.12	18.91	20.43	20.74
	3H	22.29	23.70	22.67	24.03	24.39	19.80	21.21	20.18	21.54	21.90
	4H	22.95	24.27	23.35	24.62	25.00	20.18	21.50	20.58	21.85	22.23
	6H	23.43	24.65	23.84	25.02	25.41	20.44	21.67	20.85	22.03	22.42
	8H	23.58	24.74	24.00	25.13	25.53	20.53	21.70	20.96	22.09	22.49
	12H	23.67	24.79	24.10	25.17	25.60	20.60	21.72	21.03	22.10	22.53
4H	2H	20.86	22.18	21.25	22.53	22.90	19.24	20.57	19.64	20.92	21.29
	3H	22.82	23.92	23.23	24.32	24.72	20.68	21.78	21.09	22.18	22.58
	4H	23.60	24.60	24.04	25.01	25.45	21.13	22.13	21.56	22.54	22.98
	6H	24.20	25.07	24.66	25.51	25.97	21.48	22.35	21.94	22.79	23.25
	8H	24.39	25.20	24.86	25.64	26.11	21.61	22.42	22.07	22.86	23.33
	12H	24.53	25.26	25.01	25.73	26.20	21.71	22.43	22.19	22.91	23.38
8H	4H	23.70	24.51	24.16	24.95	25.42	21.45	22.26	21.91	22.70	23.17
	6H	24.37	25.04	24.87	25.53	26.01	21.88	22.55	22.37	23.04	23.51
	8H	24.61	25.21	25.12	25.72	26.21	22.06	22.66	22.57	23.17	23.65
	12H	24.81	25.34	25.32	25.83	26.39	22.21	22.74	22.72	23.23	23.80
12H	4H	23.69	24.41	24.17	24.89	25.36	21.49	22.21	21.97	22.69	23.16
	6H	24.36	24.96	24.87	25.47	25.96	21.93	22.53	22.44	23.04	23.53
	8H	24.64	25.17	25.15	25.66	26.23	22.16	22.69	22.67	23.18	23.74