

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: P242706

Luminaire Tested: S124RDRP-S1195D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242706
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-S1195D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

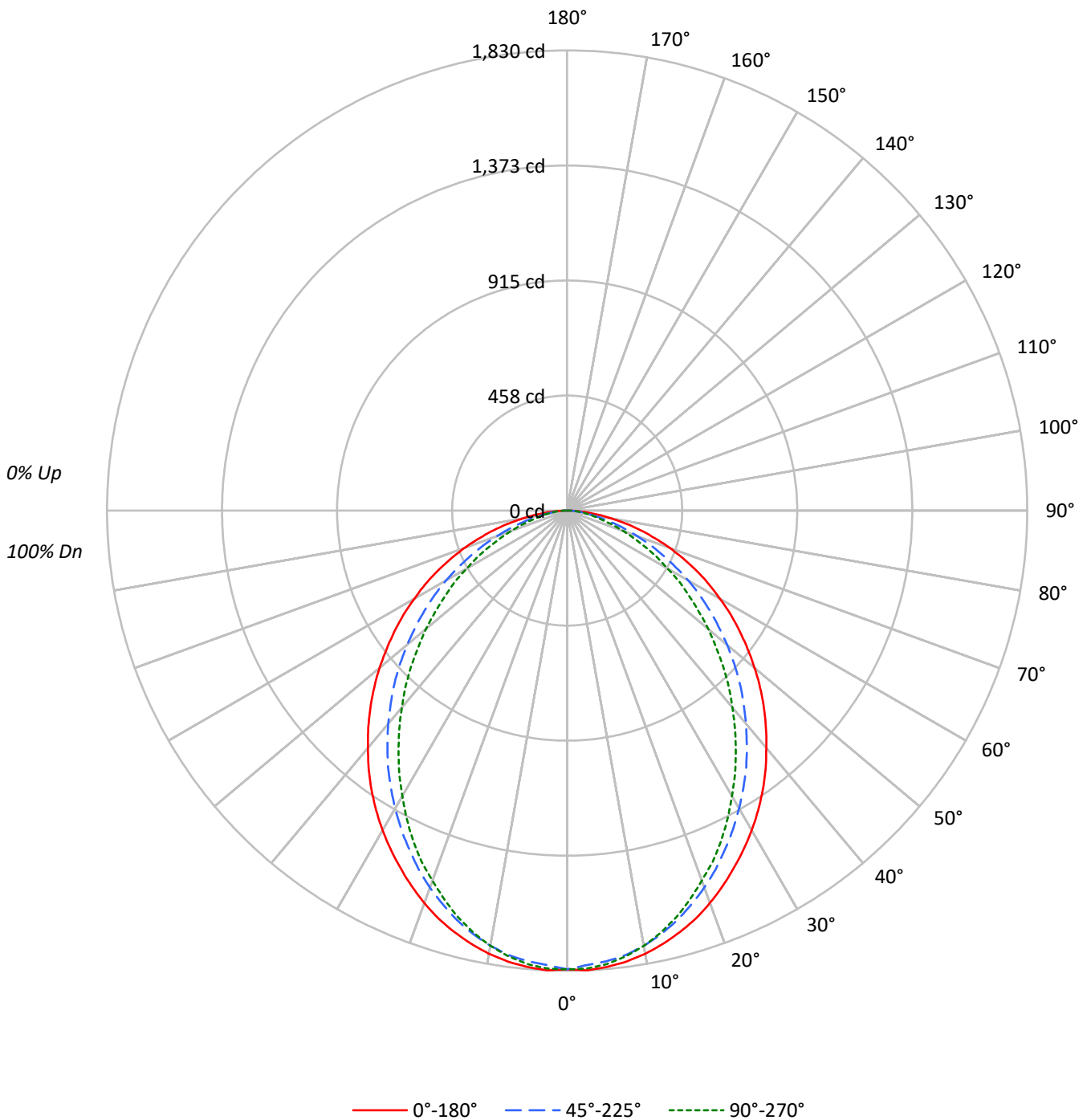
Lumens per Lamp: N/A
Luminaire Lumens: 4215.4 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16217	16217	16217
5°	16254	16054	16154
10°	16152	15861	15861
15°	15966	15529	15413
20°	15711	15091	14812
25°	15386	14577	14208
30°	15070	14037	13449
35°	14719	13476	12687
40°	14297	12838	11865
45°	13908	12205	11028
50°	13465	11475	10142
55°	12990	10716	9179
60°	12468	9884	8196
65°	11987	8844	7227
70°	11290	7695	6136
75°	10410	6381	4990
80°	9081	4863	4576
85°	7690	4416	4131

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13908 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.6	4.1
10°-20°	478.3	11.3
20°-30°	690.6	16.4
30°-40°	782.7	18.6
40°-50°	755.7	17.9
50°-60°	628.2	14.9
60°-70°	433.6	10.3
70°-80°	219.1	5.2
80°-90°	55.7	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°	1340.5	31.8
0°-40°	2123.1	50.4
0°-60°	3507.0	83.2
0°-90°	4215.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4215.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1824	1824	1824	1824	1824	
5°	1822	1816	1799	1813	1810	173
15°	1735	1722	1688	1685	1675	489
25°	1569	1544	1486	1463	1449	723
35°	1356	1312	1242	1194	1169	848
45°	1106	1055	971	902	877	853
55°	838	782	692	619	592	750
65°	570	510	420	360	344	563
75°	303	251	186	154	145	320
85°	75	48	43	40	40	87
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1824.4	1824.4	1824.4	1824.4	1824.4
2.5°	1830.0	1824.4	1809.0	1824.4	1823.0
5°	1821.6	1816.0	1799.2	1813.2	1810.4
7.5°	1809.0	1803.4	1782.5	1792.2	1788.1
10°	1789.5	1782.5	1757.3	1762.9	1757.3
12.5°	1764.3	1755.9	1725.2	1728.0	1719.6
15°	1735.0	1722.4	1687.5	1684.7	1674.9
17.5°	1701.4	1683.3	1642.8	1635.8	1621.8
20°	1660.9	1642.8	1595.3	1584.1	1565.9
22.5°	1616.2	1595.3	1543.6	1525.4	1511.5
25°	1568.7	1543.6	1486.3	1462.6	1448.6
27.5°	1519.8	1489.1	1429.0	1401.1	1381.6
30°	1468.2	1433.2	1367.6	1332.7	1310.3
32.5°	1413.7	1373.2	1304.7	1262.8	1241.9
35°	1356.4	1311.7	1241.9	1194.4	1169.2
37.5°	1296.3	1250.2	1173.4	1121.7	1096.6
40°	1232.1	1186.0	1106.4	1047.7	1022.5
42.5°	1170.6	1121.7	1037.9	977.8	951.3
45°	1106.4	1054.7	970.9	902.4	877.3
47.5°	1040.7	987.6	901.0	829.8	801.8
50°	973.7	919.2	829.8	759.9	733.4
52.5°	905.2	852.1	759.9	688.7	660.7
55°	838.2	782.3	691.5	618.8	592.3
57.5°	772.5	713.8	624.4	550.4	530.8
60°	701.3	645.4	556.0	483.3	461.0
62.5°	637.0	578.3	486.1	420.5	403.7
65°	569.9	509.9	420.5	360.4	343.6
67.5°	500.1	442.8	359.0	305.9	286.4
70°	434.4	375.8	296.1	250.0	236.1
72.5°	364.6	312.9	238.9	201.2	188.6
75°	303.1	251.4	185.8	153.7	145.3
77.5°	238.9	194.2	138.3	115.9	113.2
80°	177.4	136.9	95.0	90.8	89.4
82.5°	124.3	88.0	68.4	65.7	64.3
85°	75.4	47.5	43.3	40.5	40.5
87.5°	32.1	21.0	19.6	18.2	19.6
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	21.02	22.59	21.39	22.90	23.22	19.05	20.62	19.42	20.93	21.25
	3H	22.79	24.20	23.17	24.53	24.89	20.31	21.72	20.68	22.04	22.40
	4H	23.45	24.78	23.85	25.13	25.50	20.68	22.01	21.08	22.36	22.73
	6H	23.93	25.15	24.34	25.52	25.91	20.95	22.17	21.36	22.53	22.93
	8H	24.08	25.25	24.50	25.63	26.03	21.04	22.21	21.46	22.59	22.99
	12H	24.18	25.29	24.61	25.68	26.11	21.10	22.22	21.53	22.60	23.03
4H	2H	21.36	22.68	21.76	23.03	23.41	19.75	21.07	20.15	21.42	21.80
	3H	23.33	24.43	23.74	24.83	25.23	21.18	22.28	21.59	22.68	23.08
	4H	24.11	25.10	24.54	25.51	25.95	21.64	22.63	22.07	23.04	23.48
	6H	24.70	25.57	25.16	26.01	26.47	21.99	22.85	22.44	23.29	23.75
	8H	24.90	25.71	25.36	26.15	26.61	22.11	22.92	22.57	23.36	23.83
	12H	25.04	25.76	25.52	26.24	26.71	22.21	22.93	22.69	23.41	23.88
8H	4H	24.20	25.01	24.66	25.45	25.92	21.95	22.76	22.41	23.20	23.67
	6H	24.87	25.54	25.37	26.03	26.51	22.38	23.05	22.88	23.54	24.02
	8H	25.12	25.72	25.63	26.22	26.71	22.56	23.16	23.07	23.67	24.16
	12H	25.31	25.84	25.82	26.33	26.90	22.72	23.25	23.23	23.74	24.30
12H	4H	24.19	24.92	24.67	25.39	25.86	21.99	22.71	22.47	23.19	23.66
	6H	24.86	25.46	25.38	25.97	26.46	22.43	23.04	22.95	23.54	24.03
	8H	25.15	25.68	25.65	26.17	26.73	22.66	23.19	23.17	23.69	24.25