

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: P243463

Luminaire Tested: S124DRP-H1195D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243463
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H1195D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

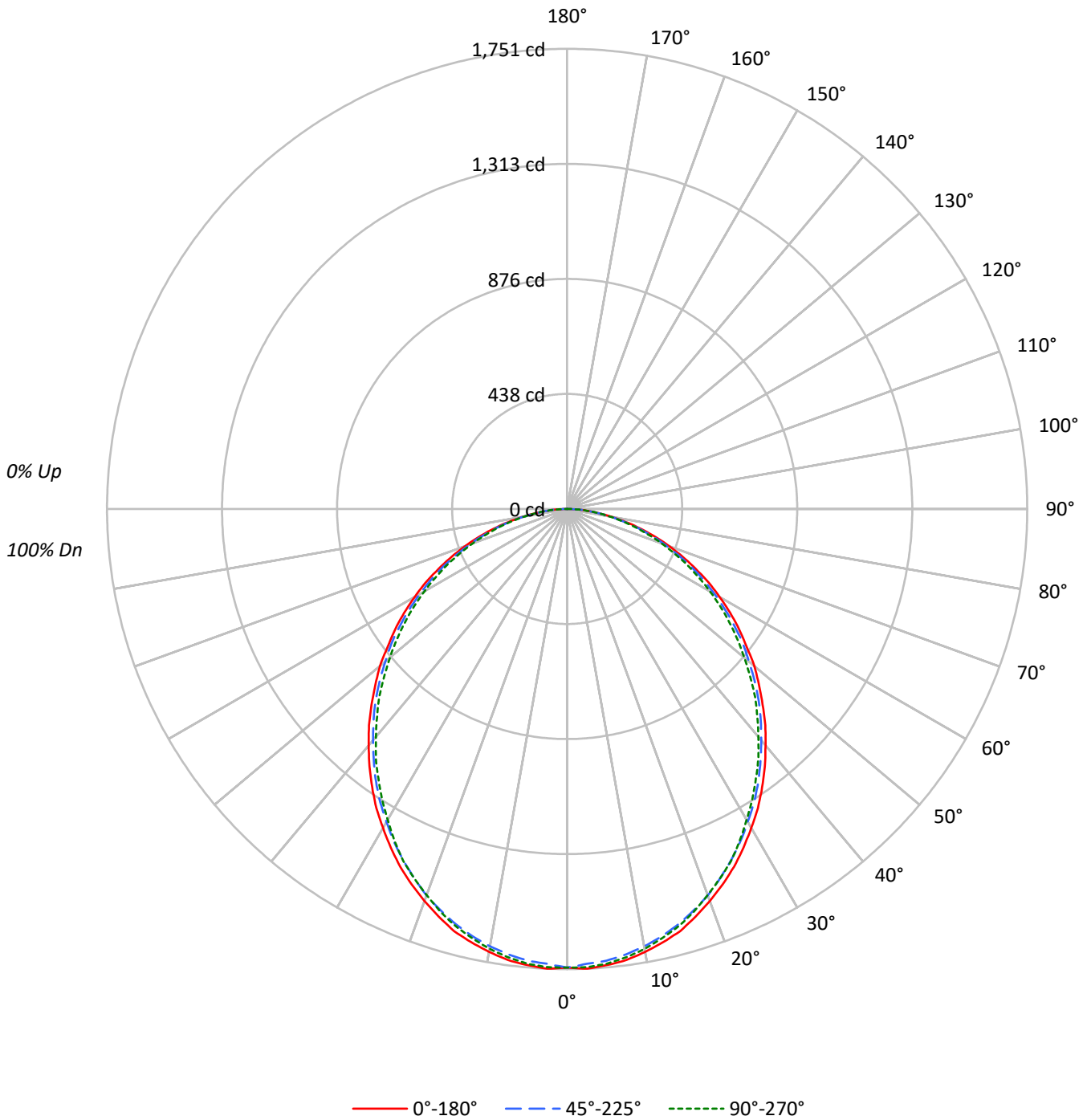
Lumens per Lamp: N/A
Luminaire Lumens: 4492.6 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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

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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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15512	15512	15512
5°	15546	15395	15495
10°	15444	15252	15342
15°	15302	15053	15119
20°	15017	14802	14789
25°	14734	14469	14484
30°	14385	14108	14021
35°	14037	13760	13590
40°	13626	13330	13132
45°	13227	12959	12709
50°	12862	12489	12175
55°	12389	12058	11685
60°	11915	11511	11157
65°	11349	10960	10603
70°	10739	10261	9928
75°	9901	9510	9218
80°	8723	8579	8359
85°	7680	7680	7527

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13227 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.5	3.7
10°-20°	463.9	10.3
20°-30°	683.2	15.2
30°-40°	794.8	17.7
40°-50°	795.2	17.7
50°-60°	695.4	15.5
60°-70°	516.5	11.5
70°-80°	294.3	6.6
80°-90°	84.8	1.9
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°	1311.6	29.2
0°-40°	2106.4	46.9
0°-60°	3597.0	80.1
0°-90°	4492.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4492.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1745	1745	1745	1745	1745	
5°	1742	1740	1725	1738	1737	165
15°	1663	1654	1636	1646	1643	468
25°	1502	1495	1475	1480	1477	691
35°	1294	1282	1268	1257	1252	809
45°	1052	1048	1031	1015	1011	813
55°	799	794	778	761	754	715
65°	540	535	521	510	504	536
75°	288	283	277	271	268	306
85°	75	74	75	72	74	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1745.1	1745.1	1745.1	1745.1	1745.1
2.5°	1750.8	1746.6	1732.4	1746.6	1745.1
5°	1742.3	1739.5	1725.3	1738.0	1736.6
7.5°	1730.9	1725.3	1709.6	1722.4	1721.0
10°	1711.1	1706.8	1689.8	1702.5	1699.7
12.5°	1688.3	1684.1	1665.6	1675.6	1672.7
15°	1662.8	1654.3	1635.8	1645.7	1642.9
17.5°	1625.9	1620.2	1601.7	1610.2	1606.0
20°	1587.5	1580.4	1564.8	1566.2	1563.4
22.5°	1546.3	1539.2	1520.8	1526.5	1520.8
25°	1502.3	1495.2	1475.3	1479.6	1476.8
27.5°	1452.6	1445.5	1427.1	1428.5	1422.8
30°	1401.5	1393.0	1374.5	1373.1	1366.0
32.5°	1350.4	1341.9	1323.4	1317.7	1310.6
35°	1293.6	1282.2	1268.0	1256.7	1252.4
37.5°	1235.4	1229.7	1208.4	1201.3	1195.6
40°	1174.3	1168.6	1148.8	1138.8	1131.7
42.5°	1116.1	1109.0	1090.5	1076.3	1070.7
45°	1052.2	1047.9	1030.9	1015.3	1011.0
47.5°	989.7	988.3	967.0	951.4	944.3
50°	930.1	921.6	903.1	888.9	880.4
52.5°	860.5	859.1	843.5	825.0	817.9
55°	799.4	793.8	778.1	761.1	754.0
57.5°	735.5	732.7	712.8	698.6	691.5
60°	670.2	664.5	647.5	634.7	627.6
62.5°	607.7	600.6	585.0	572.2	565.1
65°	539.6	535.3	521.1	509.8	504.1
67.5°	475.7	470.0	455.8	445.9	440.2
70°	413.2	404.7	394.8	386.2	382.0
72.5°	350.7	343.6	335.1	329.4	323.8
75°	288.3	282.6	276.9	271.2	268.4
77.5°	228.6	222.9	220.1	218.7	215.8
80°	170.4	167.6	167.6	166.1	163.3
82.5°	120.7	117.9	117.9	117.9	116.4
85°	75.3	73.8	75.3	72.4	73.8
87.5°	35.5	35.5	36.9	35.5	36.9
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	20.82	22.44	21.19	22.75	23.07	20.48	22.09	20.84	22.40	22.72
	3H	22.58	24.04	22.95	24.36	24.72	22.19	23.65	22.56	23.97	24.33
	4H	23.23	24.61	23.63	24.95	25.33	22.84	24.21	23.23	24.56	24.93
	6H	23.71	24.98	24.12	25.35	25.74	23.33	24.60	23.74	24.96	25.35
	8H	23.86	25.08	24.28	25.46	25.86	23.49	24.70	23.91	25.09	25.49
	12H	23.97	25.13	24.39	25.51	25.94	23.60	24.76	24.03	25.15	25.57
4H	2H	21.40	22.77	21.79	23.12	23.49	21.12	22.49	21.52	22.84	23.22
	3H	23.37	24.52	23.78	24.92	25.32	23.05	24.20	23.46	24.60	25.00
	4H	24.16	25.20	24.59	25.61	26.05	23.83	24.87	24.26	25.28	25.72
	6H	24.76	25.67	25.21	26.11	26.56	24.44	25.35	24.90	25.79	26.25
	8H	24.96	25.81	25.42	26.25	26.72	24.65	25.50	25.11	25.95	26.41
	12H	25.11	25.87	25.59	26.35	26.82	24.81	25.58	25.29	26.05	26.52
8H	4H	24.44	25.29	24.90	25.73	26.20	24.15	25.00	24.61	25.44	25.91
	6H	25.16	25.87	25.65	26.35	26.83	24.89	25.60	25.38	26.09	26.56
	8H	25.43	26.07	25.94	26.57	27.06	25.17	25.81	25.68	26.32	26.80
	12H	25.66	26.22	26.16	26.71	27.27	25.41	25.97	25.92	26.46	27.02
12H	4H	24.47	25.23	24.95	25.71	26.18	24.18	24.95	24.66	25.42	25.89
	6H	25.21	25.85	25.72	26.35	26.84	24.95	25.59	25.46	26.09	26.58
	8H	25.54	26.10	26.05	26.59	27.15	25.29	25.86	25.80	26.35	26.91