

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: P243295

Luminaire Tested: S123DRP-H1165D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243295
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H1165D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

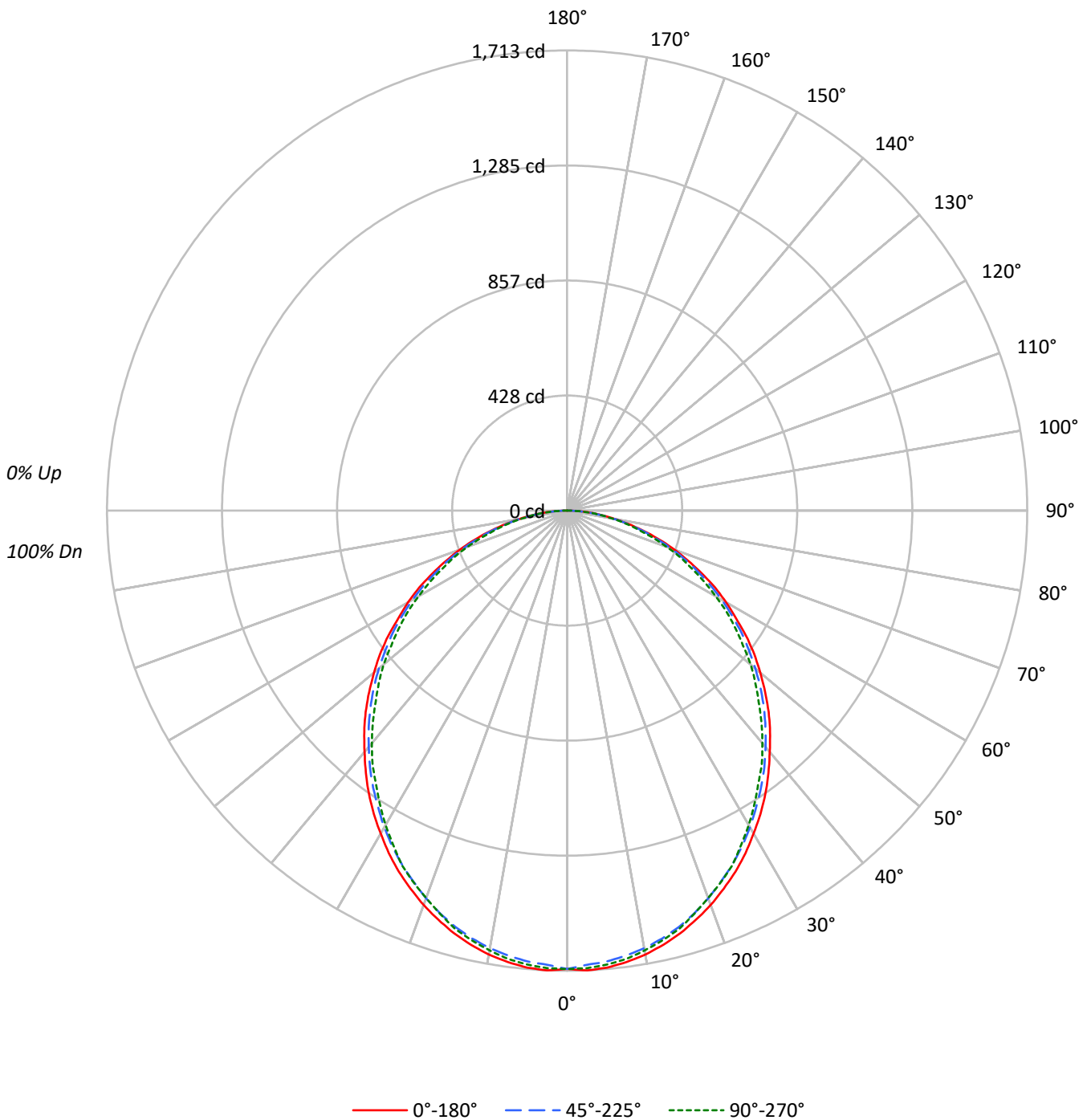
Lumens per Lamp: N/A
Luminaire Lumens: 4513.7 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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	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	94	97	94	91	94	91	89	90	88	86	84																												
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70																												
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59																												
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51																												
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44																												
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39																												
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34																												
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30																												
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20681	20681	20681
5°	20777	20503	20641
10°	20654	20360	20464
15°	20441	20141	20229
20°	20159	19813	19795
25°	19829	19452	19472
30°	19431	19057	18920
35°	19046	18628	18358
40°	18562	18184	17894
45°	18181	17747	17288
50°	17692	17241	16817
55°	17181	16735	16171
60°	16572	16129	15481
65°	15855	15370	14725
70°	15055	14555	13960
75°	13966	13572	12846
80°	12565	12271	11881
85°	11738	11154	10764

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18181 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.0	3.6
10°-20°	455.2	10.1
20°-30°	673.9	14.9
30°-40°	790.4	17.5
40°-50°	799.1	17.7
50°-60°	706.7	15.7
60°-70°	530.8	11.8
70°-80°	305.9	6.8
80°-90°	90.7	2.0
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°	1290.1	28.6
0°-40°	2080.5	46.1
0°-60°	3586.3	79.5
0°-90°	4513.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4513.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1708	1701	1685	1699	1696	162
15°	1629	1620	1605	1616	1612	459
25°	1483	1471	1454	1462	1456	683
35°	1287	1276	1259	1255	1241	804
45°	1061	1052	1035	1021	1008	817
55°	813	807	792	776	765	726
65°	553	549	536	522	513	548
75°	298	295	290	281	274	316
85°	84	83	80	79	77	95
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1706.2	1706.2	1706.2	1706.2	1706.2
2.5°	1713.3	1707.6	1692.2	1707.6	1704.8
5°	1707.6	1700.6	1685.1	1699.2	1696.4
7.5°	1695.0	1687.9	1671.1	1686.5	1683.7
10°	1678.1	1671.1	1654.2	1666.8	1662.6
12.5°	1655.6	1648.6	1631.7	1641.5	1638.7
15°	1628.9	1620.4	1605.0	1616.2	1612.0
17.5°	1596.5	1589.5	1572.6	1586.7	1574.0
20°	1562.8	1555.7	1536.0	1548.7	1534.6
22.5°	1523.4	1514.9	1495.2	1503.7	1496.6
25°	1482.6	1471.3	1454.4	1461.5	1455.9
27.5°	1437.6	1426.3	1409.4	1412.2	1402.4
30°	1388.3	1378.5	1361.6	1364.4	1351.8
32.5°	1339.1	1330.7	1309.6	1309.6	1296.9
35°	1287.1	1275.8	1258.9	1254.7	1240.6
37.5°	1230.8	1220.9	1205.5	1198.4	1190.0
40°	1173.1	1167.5	1149.2	1140.8	1130.9
42.5°	1118.3	1108.4	1092.9	1081.7	1070.4
45°	1060.6	1052.2	1035.3	1021.2	1008.5
47.5°	1000.1	993.1	976.2	960.7	950.9
50°	938.2	932.6	914.3	897.4	891.8
52.5°	877.7	870.7	852.4	836.9	825.7
55°	813.0	807.4	791.9	776.5	765.2
57.5°	744.1	744.1	727.2	713.2	704.7
60°	683.6	676.6	665.3	649.9	638.6
62.5°	620.3	616.1	600.6	585.2	576.7
65°	552.8	548.6	535.9	521.9	513.4
67.5°	486.7	485.3	474.0	462.8	457.2
70°	424.8	422.0	410.7	399.5	393.9
72.5°	361.5	358.7	348.8	339.0	332.0
75°	298.2	295.4	289.8	281.3	274.3
77.5°	236.3	236.3	229.3	226.5	223.7
80°	180.0	178.6	175.8	173.0	170.2
82.5°	129.4	128.0	125.2	123.8	123.8
85°	84.4	83.0	80.2	78.8	77.4
87.5°	43.6	40.8	39.4	36.6	35.2
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	21.98	23.60	22.34	23.92	24.23	21.67	23.29	22.03	23.60	23.92
	3H	23.77	25.24	24.15	25.57	25.93	23.42	24.89	23.80	25.22	25.58
	4H	24.45	25.84	24.85	26.18	26.56	24.07	25.45	24.47	25.80	26.18
	6H	24.95	26.23	25.36	26.60	26.99	24.57	25.85	24.98	26.22	26.61
	8H	25.11	26.34	25.54	26.73	27.13	24.74	25.97	25.17	26.36	26.76
	12H	25.24	26.41	25.67	26.80	27.22	24.86	26.04	25.29	26.42	26.85
4H	2H	22.57	23.95	22.96	24.30	24.67	22.32	23.71	22.72	24.05	24.43
	3H	24.59	25.75	25.00	26.15	26.55	24.30	25.46	24.71	25.85	26.25
	4H	25.40	26.45	25.83	26.87	27.30	25.07	26.13	25.51	26.54	26.97
	6H	26.03	26.95	26.48	27.39	27.85	25.70	26.62	26.16	27.06	27.52
	8H	26.25	27.11	26.71	27.55	28.02	25.92	26.79	26.39	27.23	27.69
	12H	26.42	27.20	26.90	27.67	28.14	26.09	26.87	26.57	27.34	27.81
8H	4H	25.70	26.56	26.16	27.00	27.46	25.41	26.27	25.87	26.71	27.18
	6H	26.45	27.17	26.94	27.65	28.13	26.16	26.88	26.66	27.37	27.84
	8H	26.75	27.39	27.26	27.90	28.38	26.46	27.11	26.97	27.61	28.10
	12H	27.00	27.57	27.51	28.06	28.62	26.71	27.28	27.22	27.77	28.33
12H	4H	25.73	26.50	26.21	26.98	27.45	25.45	26.22	25.93	26.70	27.17
	6H	26.50	27.15	27.01	27.65	28.14	26.23	26.87	26.74	27.38	27.87
	8H	26.86	27.43	27.37	27.92	28.48	26.59	27.16	27.10	27.65	28.21