

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: P243308

Luminaire Tested: S123DRP-H775D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243308
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-H775D935-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

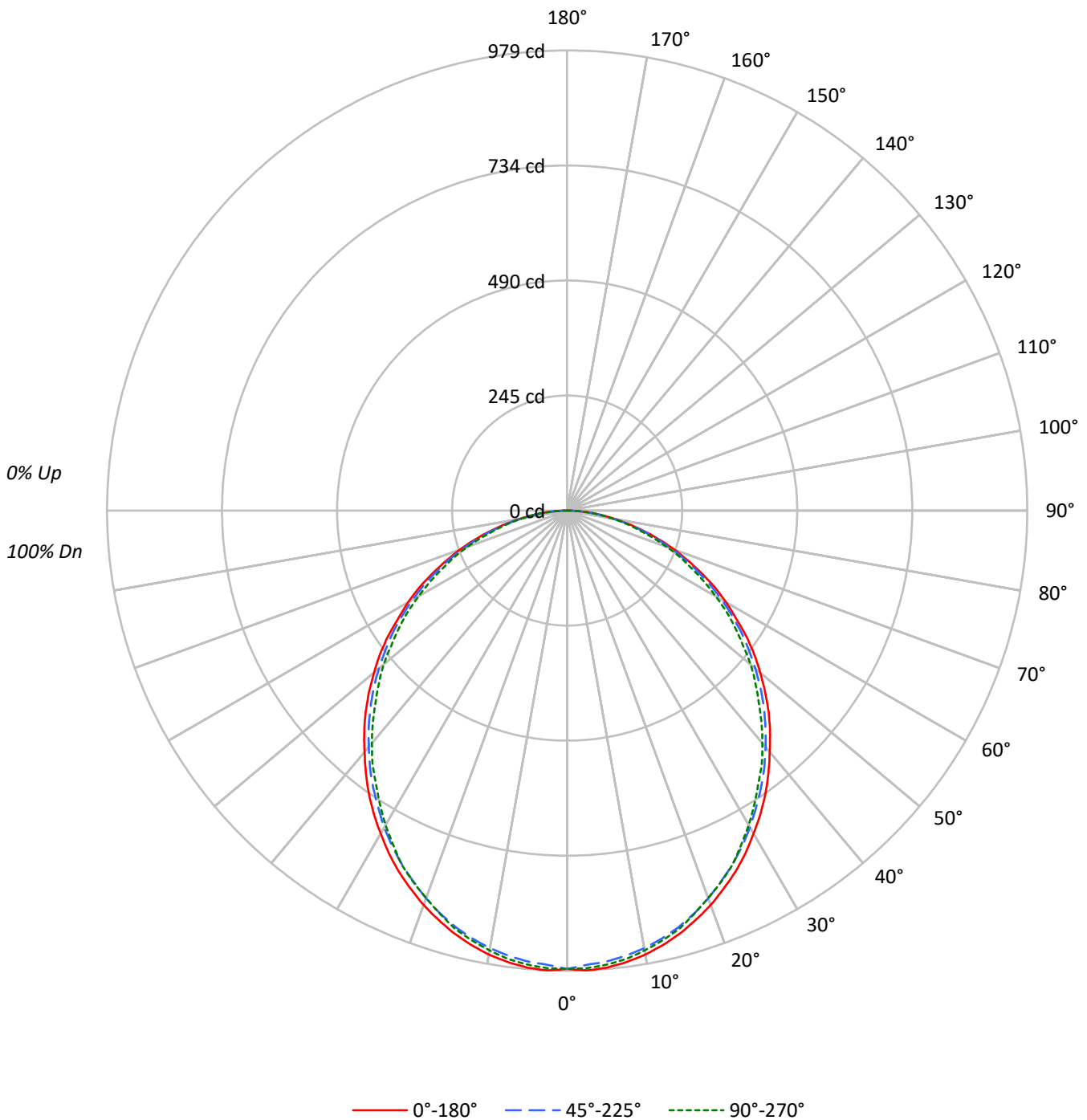
Lumens per Lamp: N/A
Luminaire Lumens: 2579.6 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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	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°	11819	11819	11819
5°	11874	11719	11796
10°	11805	11636	11695
15°	11682	11510	11561
20°	11520	11324	11314
25°	11332	11117	11127
30°	11105	10892	10812
35°	10885	10647	10491
40°	10609	10393	10226
45°	10390	10143	9881
50°	10111	9853	9612
55°	9820	9565	9241
60°	9472	9217	8848
65°	9060	8785	8415
70°	8605	8318	7978
75°	7980	7756	7343
80°	7183	7015	6792
85°	6703	6370	6147

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10390 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	3.6
10°-20°	260.2	10.1
20°-30°	385.2	14.9
30°-40°	451.7	17.5
40°-50°	456.7	17.7
50°-60°	403.9	15.7
60°-70°	303.3	11.8
70°-80°	174.8	6.8
80°-90°	51.8	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°	737.3	28.6
0°-40°	1189.0	46.1
0°-60°	2049.6	79.5
0°-90°	2579.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2579.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	975	975	975	975	975	
5°	976	972	963	971	970	93
15°	931	926	917	924	921	262
25°	847	841	831	835	832	390
35°	736	729	720	717	709	460
45°	606	601	592	584	576	467
55°	465	461	453	444	437	415
65°	316	314	306	298	293	313
75°	170	169	166	161	157	181
85°	48	47	46	45	44	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	975.1	975.1	975.1	975.1	975.1
2.5°	979.1	975.9	967.1	975.9	974.3
5°	975.9	971.9	963.1	971.1	969.5
7.5°	968.7	964.7	955.0	963.9	962.3
10°	959.1	955.0	945.4	952.6	950.2
12.5°	946.2	942.2	932.5	938.2	936.5
15°	930.9	926.1	917.2	923.7	921.3
17.5°	912.4	908.4	898.8	906.8	899.6
20°	893.1	889.1	877.9	885.1	877.1
22.5°	870.6	865.8	854.5	859.4	855.3
25°	847.3	840.9	831.2	835.3	832.0
27.5°	821.6	815.2	805.5	807.1	801.5
30°	793.4	787.8	778.2	779.8	772.5
32.5°	765.3	760.5	748.4	748.4	741.2
35°	735.6	729.1	719.5	717.1	709.0
37.5°	703.4	697.8	688.9	684.9	680.1
40°	670.5	667.2	656.8	652.0	646.3
42.5°	639.1	633.5	624.6	618.2	611.8
45°	606.1	601.3	591.7	583.6	576.4
47.5°	571.6	567.6	557.9	549.1	543.4
50°	536.2	533.0	522.5	512.9	509.7
52.5°	501.6	497.6	487.2	478.3	471.9
55°	464.7	461.4	452.6	443.8	437.3
57.5°	425.3	425.3	415.6	407.6	402.8
60°	390.7	386.7	380.2	371.4	365.0
62.5°	354.5	352.1	343.3	334.4	329.6
65°	315.9	313.5	306.3	298.2	293.4
67.5°	278.1	277.3	270.9	264.5	261.3
70°	242.8	241.2	234.7	228.3	225.1
72.5°	206.6	205.0	199.4	193.7	189.7
75°	170.4	168.8	165.6	160.8	156.8
77.5°	135.1	135.1	131.0	129.4	127.8
80°	102.9	102.1	100.5	98.9	97.3
82.5°	74.0	73.2	71.5	70.7	70.7
85°	48.2	47.4	45.8	45.0	44.2
87.5°	24.9	23.3	22.5	20.9	20.1
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	20.03	21.66	20.40	21.97	22.29	19.72	21.35	20.09	21.66	21.98
	3H	21.83	23.30	22.21	23.63	23.99	21.48	22.95	21.85	23.27	23.63
	4H	22.51	23.89	22.90	24.24	24.61	22.13	23.51	22.52	23.86	24.23
	6H	23.00	24.29	23.41	24.65	25.04	22.63	23.91	23.04	24.27	24.67
	8H	23.17	24.40	23.60	24.79	25.19	22.80	24.02	23.22	24.41	24.81
	12H	23.30	24.47	23.72	24.85	25.28	22.92	24.09	23.35	24.47	24.90
4H	2H	20.62	22.01	21.02	22.36	22.73	20.38	21.76	20.78	22.11	22.49
	3H	22.65	23.81	23.06	24.21	24.61	22.35	23.51	22.76	23.91	24.31
	4H	23.46	24.51	23.89	24.92	25.36	23.13	24.18	23.56	24.60	25.03
	6H	24.09	25.01	24.54	25.45	25.90	23.76	24.68	24.21	25.12	25.58
	8H	24.31	25.17	24.77	25.61	26.07	23.98	24.84	24.44	25.28	25.75
	12H	24.48	25.25	24.96	25.73	26.20	24.15	24.92	24.63	25.40	25.87
8H	4H	23.75	24.61	24.21	25.05	25.52	23.46	24.32	23.92	24.77	25.23
	6H	24.51	25.22	25.00	25.71	26.19	24.22	24.94	24.71	25.42	25.90
	8H	24.80	25.45	25.31	25.95	26.44	24.52	25.16	25.03	25.67	26.15
	12H	25.06	25.63	25.57	26.12	26.68	24.77	25.34	25.27	25.83	26.39
12H	4H	23.78	24.56	24.26	25.03	25.50	23.50	24.28	23.98	24.75	25.22
	6H	24.56	25.21	25.07	25.71	26.20	24.29	24.93	24.79	25.44	25.92
	8H	24.92	25.49	25.42	25.98	26.54	24.64	25.21	25.15	25.70	26.26