

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P334148

Luminaire Tested: S124DP-S1020D930-4F0-1E-UDD-D

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2019
Report Number: P334148
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DP-S1020D930-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1020 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3165.5 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Direct

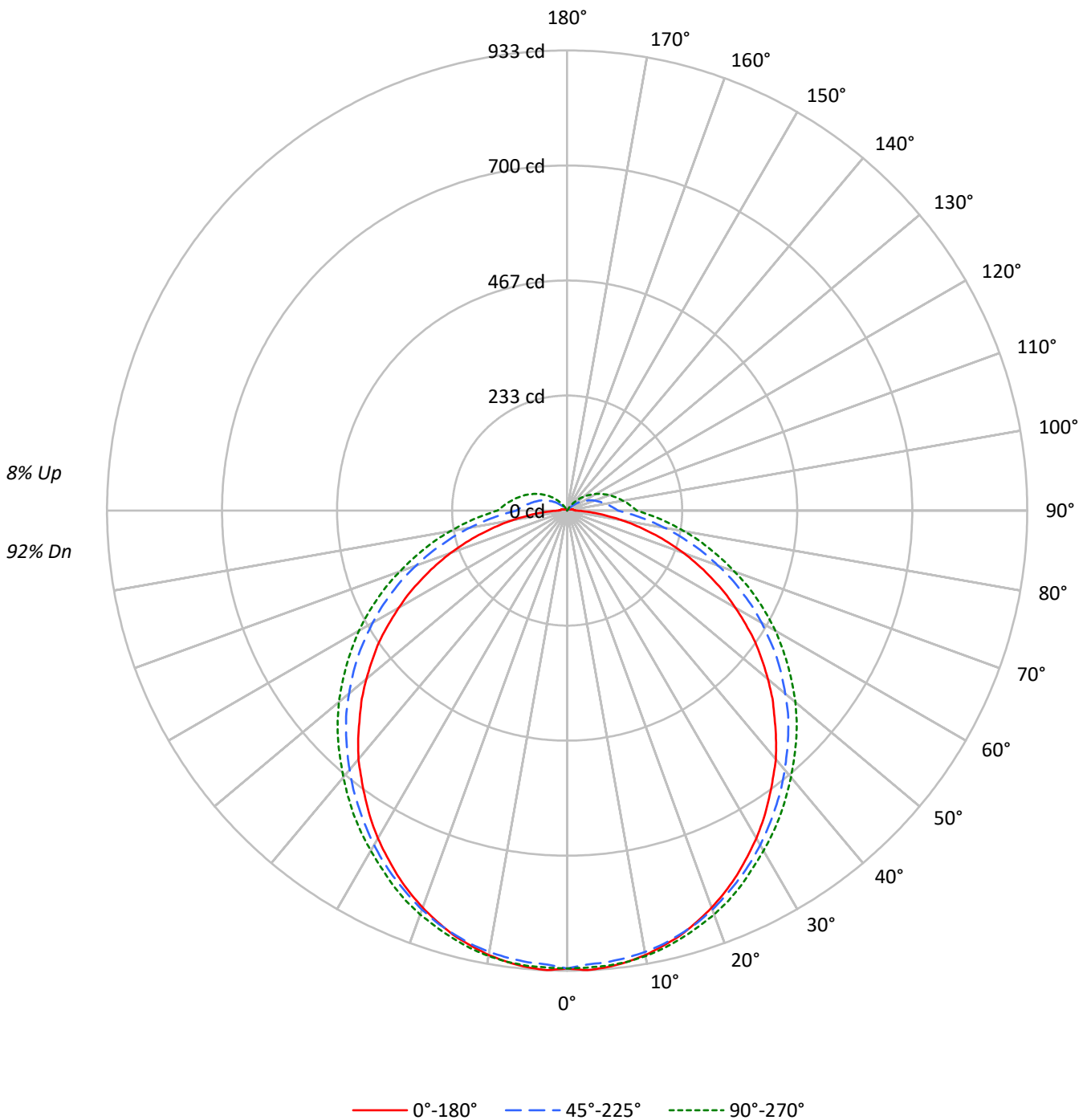
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	117	117	117	117	114	114	114	114	107	107	107		101	101	101		95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84		86	83	80		81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68		74	70	66		70	67	63	60
3	87	75	67	60	83	73	65	59	69	62	57		65	60	55		62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48		58	52	47		55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41		52	45	40		49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36		47	40	35		45	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32		43	36	31		41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28		39	32	28		37	31	27	25
9	54	40	32	26	52	39	31	26	38	30	25		36	29	25		34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23		33	27	23		32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7496	7496	7496
5°	7519	7325	7347
10°	7472	7206	7200
15°	7405	7067	7029
20°	7305	6914	6861
25°	7191	6742	6677
30°	7068	6572	6488
35°	6928	6397	6323
40°	6816	6231	6150
45°	6651	6077	6002
50°	6511	5901	5846
55°	6367	5734	5661
60°	6140	5522	5494
65°	5893	5294	5288
70°	5595	5033	5049
75°	5175	4748	4832
80°	4711	4474	4620
85°	4122	4230	4494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6651 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.0	2.8
10°-20°	252.1	8.0
20°-30°	381.1	12.0
30°-40°	461.1	14.6
40°-50°	487.4	15.4
50°-60°	458.7	14.5
60°-70°	380.7	12.0
70°-80°	267.1	8.4
80°-90°	150.6	4.8
90°-100°	89.7	2.8
100°-110°	66.4	2.1
110°-120°	44.6	1.4
120°-130°	25.1	0.8
130°-140°	10.9	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	721.1	22.8
0°-40°	1182.2	37.3
0°-60°	2128.4	67.2
0°-90°	2926.8	92.5
90°-120°	200.6	6.3
90°-150°	238.7	7.5
90°-180°	239.0	7.6
0°-180°	3165.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	928	928	928	928	928	
5°	930	926	919	927	926	88
15°	891	892	889	898	897	251
25°	815	821	824	836	837	375
35°	713	726	736	751	754	447
45°	595	614	634	652	657	460
55°	466	488	519	540	546	415
65°	322	356	391	417	425	320
75°	179	217	261	290	299	190
85°	55	99	146	177	187	57
90°	17	58	103	133	141	11
95°	14	48	90	118	128	11
105°	9	30	69	95	103	11
115°	6	16	49	72	79	7
125°	4	3	29	49	55	4
135°	2	2	9	26	32	2
145°	1	0	0	6	10	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	928.5	928.5	928.5	928.5	928.5
2.5°	932.6	929.5	921.2	928.5	927.4
5°	929.5	926.4	919.1	927.4	926.4
7.5°	923.3	921.2	914.9	924.3	923.3
10°	914.9	913.9	908.7	918.1	917.0
12.5°	903.5	903.5	900.4	908.7	908.7
15°	891.0	892.1	888.9	898.3	897.3
17.5°	874.4	877.5	876.5	885.8	884.8
20°	856.7	859.8	860.9	871.3	871.3
22.5°	837.0	841.1	843.2	853.6	855.7
25°	815.1	821.4	824.5	835.9	837.0
27.5°	791.2	800.6	804.7	815.1	816.2
30°	767.3	775.6	782.9	794.3	796.4
32.5°	741.3	751.7	760.0	773.5	775.6
35°	713.2	725.7	736.1	750.7	753.8
37.5°	685.2	699.7	712.2	726.8	729.9
40°	658.1	671.7	686.2	701.8	706.0
42.5°	626.9	642.5	660.2	677.9	681.0
45°	594.7	614.5	634.2	651.9	657.1
47.5°	564.6	584.3	607.2	624.9	631.1
50°	531.3	554.2	577.0	597.8	604.1
52.5°	498.0	520.9	547.9	568.7	575.0
55°	465.8	487.6	518.8	539.6	545.8
57.5°	429.4	456.4	486.6	511.5	516.7
60°	394.0	421.1	455.4	479.3	487.6
62.5°	359.7	389.9	424.2	448.1	456.4
65°	322.3	355.6	390.9	416.9	425.2
67.5°	287.0	322.3	359.7	385.7	394.0
70°	250.6	285.9	325.4	353.5	360.8
72.5°	215.2	251.6	294.2	321.3	329.6
75°	178.8	217.3	261.0	290.1	299.4
77.5°	144.5	185.1	230.8	259.9	270.3
80°	113.3	154.9	200.7	231.9	240.2
82.5°	82.1	125.8	171.6	203.8	213.1
85°	55.1	98.8	145.6	176.8	187.1
87.5°	34.3	76.9	122.7	152.8	162.2
90°	16.6	58.2	102.9	133.1	141.4
92.5°	15.6	52.0	96.7	125.8	134.1
95°	13.5	47.8	90.5	118.5	127.9
97.5°	12.5	42.6	85.3	112.3	121.6
100°	11.4	38.5	79.0	107.1	114.4
102.5°	11.4	34.3	73.8	100.9	109.2
105°	9.4	30.2	68.6	94.6	102.9
107.5°	9.4	27.0	63.4	89.4	96.7
110°	8.3	22.9	59.3	83.2	91.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	19.8	54.1	76.9	85.3
115°	6.2	15.6	48.9	71.7	79.0
117.5°	6.2	12.5	43.7	65.5	73.8
120°	5.2	8.3	38.5	59.3	67.6
122.5°	5.2	5.2	33.3	54.1	61.3
125°	4.2	3.1	29.1	48.9	55.1
127.5°	4.2	3.1	23.9	42.6	49.9
130°	3.1	2.1	18.7	37.4	43.7
132.5°	3.1	2.1	14.6	32.2	38.5
135°	2.1	2.1	9.4	26.0	32.2
137.5°	2.1	1.0	5.2	20.8	26.0
140°	2.1	1.0	2.1	15.6	20.8
142.5°	1.0	1.0	0.0	11.4	15.6
145°	1.0	0.0	0.0	6.2	10.4
147.5°	1.0	0.0	0.0	1.0	5.2
150°	1.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)