

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P930088

Luminaire Tested: DFN2DS-HX2F0-040DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX2F0-040DS935-RLL
Description: 2 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

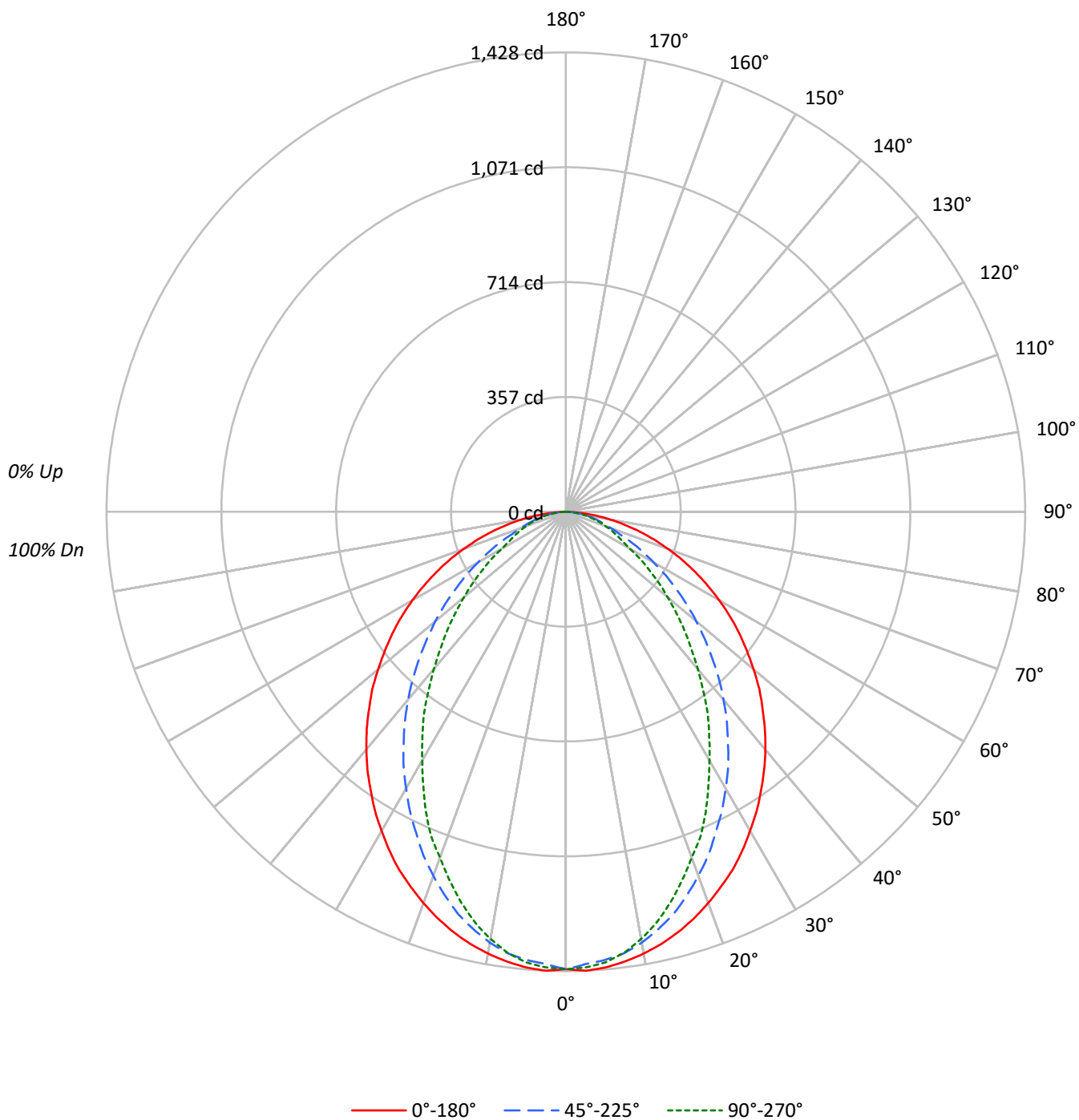
Lumens per Lamp: N/A
Luminaire Lumens: 2924.0 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3350	3350	3350
5°	3363	3308	3326
10°	3337	3254	3226
15°	3299	3157	3066
20°	3246	3020	2868
25°	3191	2863	2676
30°	3116	2702	2429
35°	3042	2528	2213
40°	2968	2347	1963
45°	2881	2144	1736
50°	2792	1938	1514
55°	2701	1717	1301
60°	2595	1485	1080
65°	2475	1248	982
70°	2331	1028	904
75°	2155	937	844
80°	1902	837	769
85°	1495	660	660

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2881 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.2	4.6
10°-20°	365.8	12.5
20°-30°	513.6	17.6
30°-40°	559.8	19.1
40°-50°	514.5	17.6
50°-60°	404.1	13.8
60°-70°	263.0	9.0
70°-80°	135.4	4.6
80°-90°	34.6	1.2
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°	1012.6	34.6
0°-40°	1572.4	53.8
0°-60°	2491.0	85.2
0°-90°	2924.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2924.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1422	1422	1422	1422	1422	
5°	1422	1415	1398	1410	1406	135
15°	1352	1338	1294	1270	1257	381
25°	1228	1186	1101	1049	1029	565
35°	1058	992	879	798	769	662
45°	865	778	643	552	521	668
55°	658	557	418	341	317	588
65°	444	340	224	180	176	440
75°	237	147	103	94	93	250
85°	55	28	24	24	24	66
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1421.8	1421.8	1421.8	1421.8	1421.8
2.5°	1428.2	1421.8	1407.6	1420.5	1417.9
5°	1421.8	1415.3	1398.5	1410.1	1406.4
7.5°	1410.1	1402.5	1384.5	1389.5	1383.1
10°	1394.7	1385.7	1360.0	1356.0	1348.5
12.5°	1375.5	1363.9	1329.0	1321.4	1307.2
15°	1352.3	1338.1	1294.4	1270.0	1257.1
17.5°	1325.3	1304.6	1250.5	1222.3	1201.7
20°	1294.4	1268.6	1204.3	1172.2	1143.8
22.5°	1260.9	1231.3	1156.6	1112.9	1093.7
25°	1227.5	1186.3	1101.3	1048.7	1029.2
27.5°	1187.7	1143.8	1049.9	989.4	959.8
30°	1145.2	1096.2	993.2	927.7	892.9
32.5°	1104.0	1044.7	939.3	862.1	829.8
35°	1057.7	992.0	878.8	797.7	769.4
37.5°	1012.6	941.8	822.2	733.3	701.2
40°	965.0	887.9	763.0	671.7	638.2
42.5°	916.1	833.8	703.8	608.5	576.5
45°	864.6	778.4	643.4	551.9	521.1
47.5°	815.8	724.5	585.5	494.1	465.8
50°	761.7	670.4	528.8	440.0	413.1
52.5°	708.9	612.4	474.8	389.8	365.4
55°	657.5	557.1	418.1	341.0	316.6
57.5°	604.8	501.8	368.0	295.9	275.4
60°	550.7	447.7	315.2	249.7	229.1
62.5°	498.0	395.1	270.1	208.5	198.2
65°	443.9	339.6	223.9	180.2	176.2
67.5°	392.5	288.2	180.2	158.2	154.4
70°	338.4	238.0	149.2	136.4	131.2
72.5°	287.0	191.7	124.8	114.6	112.0
75°	236.7	146.6	102.9	93.9	92.7
77.5°	186.6	104.1	81.1	75.9	73.3
80°	140.2	74.6	61.7	56.7	56.7
82.5°	97.8	50.2	42.5	39.8	39.8
85°	55.3	28.3	24.4	24.4	24.4
87.5°	20.6	10.2	10.2	9.0	9.0
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	15.43	16.96	15.80	17.27	17.58	11.39	12.92	11.76	13.23	13.54
	3H	17.20	18.57	17.58	18.89	19.26	12.66	14.03	13.04	14.35	14.72
	4H	17.87	19.15	18.27	19.50	19.87	13.16	14.44	13.56	14.79	15.17
	6H	18.36	19.54	18.77	19.90	20.30	13.54	14.73	13.96	15.09	15.48
	8H	18.52	19.65	18.95	20.04	20.44	13.67	14.79	14.09	15.18	15.59
	12H	18.62	19.70	19.05	20.08	20.51	13.75	14.83	14.18	15.21	15.64
4H	2H	15.54	16.82	15.94	17.17	17.55	12.09	13.37	12.49	13.72	14.10
	3H	17.47	18.54	17.88	18.93	19.34	13.53	14.60	13.94	15.00	15.40
	4H	18.22	19.18	18.65	19.59	20.03	14.13	15.09	14.57	15.51	15.94
	6H	18.81	19.65	19.27	20.09	20.55	14.62	15.45	15.08	15.90	16.36
	8H	19.03	19.81	19.49	20.25	20.72	14.78	15.56	15.25	16.01	16.47
	12H	19.18	19.88	19.66	20.35	20.83	14.90	15.60	15.38	16.07	16.54
8H	4H	18.25	19.02	18.71	19.47	19.93	14.49	15.26	14.95	15.71	16.18
	6H	18.88	19.53	19.38	20.02	20.49	15.07	15.72	15.57	16.21	16.69
	8H	19.13	19.71	19.65	20.22	20.71	15.29	15.87	15.81	16.38	16.87
	12H	19.34	19.85	19.85	20.34	20.90	15.47	15.98	15.98	16.48	17.04
12H	4H	18.23	18.92	18.71	19.40	19.87	14.53	15.23	15.01	15.70	16.17
	6H	18.86	19.44	19.38	19.95	20.44	15.14	15.72	15.65	16.22	16.71
	8H	19.15	19.66	19.66	20.15	20.71	15.41	15.92	15.92	16.41	16.98