

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: P930283

Luminaire Tested: DFN2DS-HX4F0-050DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX4F0-050DS930-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

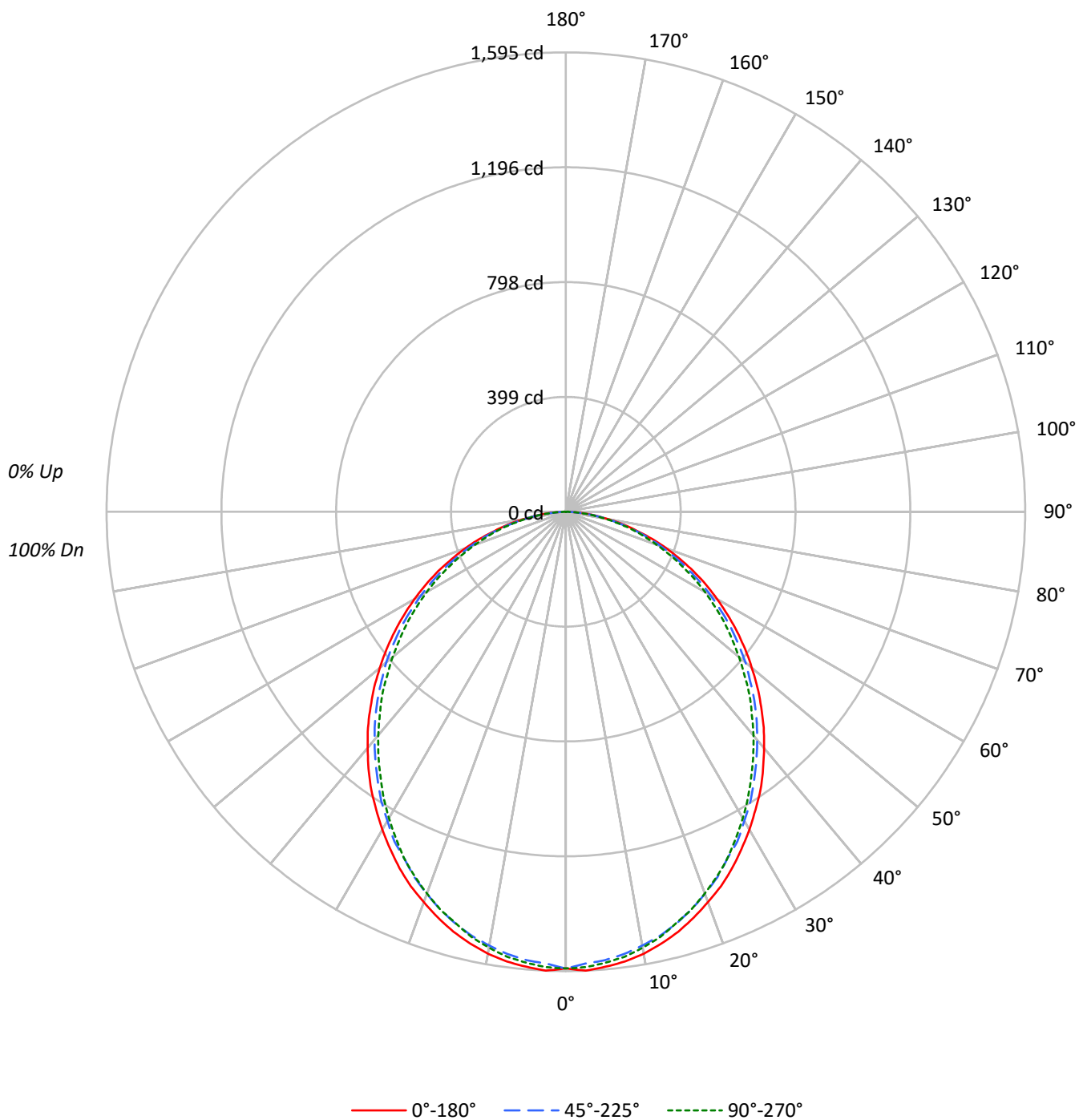
Lumens per Lamp: N/A
Luminaire Lumens: 4034.2 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 48.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
Total Harmonic Distortion (THDi): 0.049
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1179	1179	1179
5°	1183	1166	1173
10°	1177	1155	1160
15°	1162	1140	1139
20°	1141	1117	1116
25°	1121	1090	1090
30°	1094	1064	1055
35°	1070	1034	1019
40°	1039	1003	984
45°	1009	973	949
50°	975	942	908
55°	941	905	872
60°	902	862	830
65°	861	818	781
70°	809	766	729
75°	736	705	688
80°	653	633	601
85°	532	508	456

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1009 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	3.7
10°-20°	419.9	10.4
20°-30°	617.1	15.3
30°-40°	716.7	17.8
40°-50°	715.8	17.7
50°-60°	624.2	15.5
60°-70°	461.4	11.4
70°-80°	261.0	6.5
80°-90°	68.9	1.7
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°	1186.2	29.4
0°-40°	1902.9	47.2
0°-60°	3242.9	80.4
0°-90°	4034.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4034.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1586	1586	1586	1586	1586	
5°	1586	1580	1563	1575	1572	151
15°	1509	1500	1480	1487	1479	425
25°	1366	1354	1328	1331	1328	629
35°	1179	1163	1139	1130	1122	736
45°	959	948	925	909	903	740
55°	726	717	698	680	672	649
65°	490	480	465	451	444	484
75°	256	253	245	236	239	273
85°	62	61	60	55	53	73
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1585.6	1585.6	1585.6	1585.6	1585.6
2.5°	1594.8	1587.2	1570.4	1585.6	1582.7
5°	1585.6	1579.6	1562.8	1574.9	1572.1
7.5°	1574.9	1565.9	1549.1	1561.4	1558.3
10°	1558.3	1547.6	1529.3	1541.4	1536.9
12.5°	1535.3	1526.3	1508.0	1515.6	1512.5
15°	1509.4	1500.3	1480.4	1486.6	1479.0
17.5°	1477.4	1468.3	1448.4	1456.0	1448.4
20°	1442.3	1433.3	1411.9	1416.4	1410.4
22.5°	1407.3	1393.6	1373.7	1373.7	1370.6
25°	1366.1	1354.0	1328.0	1331.0	1328.0
27.5°	1320.3	1309.6	1289.9	1285.3	1277.8
30°	1274.7	1262.4	1239.6	1235.1	1228.9
32.5°	1225.8	1216.8	1192.3	1183.1	1177.0
35°	1178.6	1163.4	1139.0	1129.8	1122.2
37.5°	1125.2	1111.5	1087.0	1076.4	1068.8
40°	1070.4	1058.1	1033.7	1020.1	1013.9
42.5°	1017.0	1004.7	980.4	965.0	956.0
45°	959.1	948.4	925.4	908.8	902.6
47.5°	902.6	891.9	867.6	850.7	841.7
50°	843.1	835.5	814.2	792.8	785.2
52.5°	785.2	774.5	754.8	738.0	727.3
55°	725.8	716.6	698.3	680.0	672.5
57.5°	666.3	658.7	638.8	620.5	614.3
60°	606.8	600.8	579.5	562.6	558.1
62.5°	548.9	538.2	523.0	507.7	501.6
65°	489.5	480.3	465.0	451.3	443.7
67.5°	428.5	420.8	407.2	396.5	390.3
70°	372.0	365.9	352.2	341.5	335.5
72.5°	314.2	308.0	300.4	289.7	285.2
75°	256.1	253.1	245.4	236.4	239.4
77.5°	204.3	198.1	195.1	190.5	186.1
80°	152.6	150.9	147.8	143.4	140.3
82.5°	103.7	103.7	102.2	96.1	96.1
85°	62.4	61.0	59.5	54.8	53.4
87.5°	27.5	24.4	21.4	16.8	15.2
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	11.85	13.47	12.22	13.78	14.09	11.41	13.02	11.77	13.33	13.65
	3H	13.60	15.06	13.98	15.39	15.75	13.11	14.57	13.49	14.89	15.26
	4H	14.25	15.62	14.65	15.97	16.34	13.76	15.13	14.15	15.47	15.85
	6H	14.72	15.99	15.13	16.35	16.74	14.22	15.49	14.63	15.85	16.24
	8H	14.86	16.07	15.29	16.46	16.86	14.36	15.57	14.79	15.96	16.36
	12H	14.95	16.11	15.38	16.50	16.92	14.44	15.60	14.87	15.98	16.41
4H	2H	12.41	13.78	12.81	14.13	14.51	12.06	13.43	12.46	13.78	14.15
	3H	14.39	15.54	14.80	15.93	16.33	13.98	15.13	14.39	15.53	15.93
	4H	15.17	16.20	15.60	16.62	17.05	14.74	15.78	15.17	16.19	16.63
	6H	15.76	16.67	16.22	17.11	17.56	15.33	16.24	15.79	16.68	17.13
	8H	15.95	16.80	16.41	17.24	17.71	15.51	16.36	15.98	16.80	17.27
	12H	16.08	16.84	16.56	17.32	17.79	15.63	16.39	16.11	16.87	17.34
8H	4H	15.44	16.29	15.90	16.73	17.19	15.07	15.91	15.53	16.35	16.82
	6H	16.15	16.86	16.65	17.35	17.82	15.77	16.48	16.27	16.96	17.44
	8H	16.41	17.04	16.92	17.55	18.04	16.02	16.65	16.53	17.16	17.65
	12H	16.61	17.17	17.12	17.66	18.22	16.20	16.76	16.71	17.25	17.81
12H	4H	15.47	16.23	15.95	16.70	17.17	15.10	15.86	15.58	16.34	16.81
	6H	16.20	16.83	16.71	17.34	17.82	15.83	16.46	16.34	16.97	17.46
	8H	16.51	17.07	17.02	17.56	18.12	16.14	16.69	16.64	17.18	17.75