

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: P930085

Luminaire Tested: DFN2DS-HX2F0-040DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930085
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-HX2F0-040DS930-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

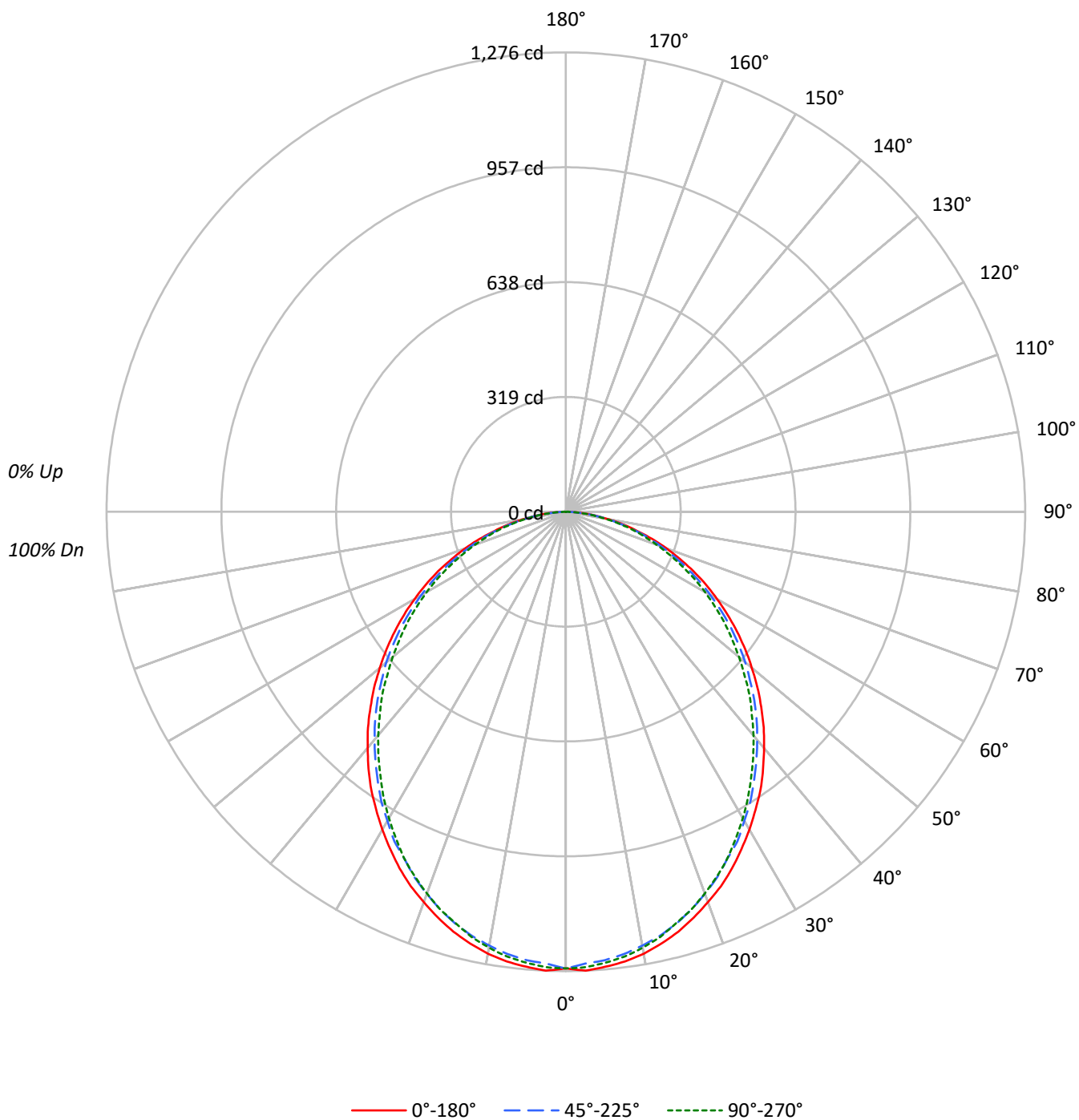
Lumens per Lamp: N/A
Luminaire Lumens: 3227.4 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V): 120
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

TEST NUMBER: P930085

CATALOG NUMBER: DFN2DS-HX2F0-040DS930-FLL

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	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2989	2989	2989
5°	3000	2957	2974
10°	2982	2927	2942
15°	2945	2889	2886
20°	2893	2832	2829
25°	2841	2762	2762
30°	2774	2698	2675
35°	2712	2621	2582
40°	2634	2543	2495
45°	2556	2467	2406
50°	2472	2387	2302
55°	2385	2295	2210
60°	2287	2185	2104
65°	2183	2074	1979
70°	2050	1941	1849
75°	1865	1787	1743
80°	1655	1605	1522
85°	1352	1287	1154

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2556 cd/sqm

TEST NUMBER: P930085

CATALOG NUMBER: DFN2DS-HX2F0-040DS930-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.4	3.7
10°-20°	335.9	10.4
20°-30°	493.7	15.3
30°-40°	573.4	17.8
40°-50°	572.7	17.7
50°-60°	499.3	15.5
60°-70°	369.1	11.4
70°-80°	208.8	6.5
80°-90°	55.1	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°	949.0	29.4
0°-40°	1522.3	47.2
0°-60°	2594.3	80.4
0°-90°	3227.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3227.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1268	1264	1250	1260	1258	120
15°	1208	1200	1184	1189	1183	340
25°	1093	1083	1062	1065	1062	503
35°	943	931	911	904	898	589
45°	767	759	740	727	722	592
55°	581	573	559	544	538	519
65°	392	384	372	361	355	387
75°	205	202	196	189	192	219
85°	50	49	48	44	43	59
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1268.5	1268.5	1268.5	1268.5	1268.5
2.5°	1275.9	1269.8	1256.3	1268.5	1266.2
5°	1268.5	1263.7	1250.2	1259.9	1257.6
7.5°	1259.9	1252.7	1239.2	1249.1	1246.6
10°	1246.6	1238.1	1223.5	1233.2	1229.5
12.5°	1228.2	1221.0	1206.4	1212.5	1209.9
15°	1207.5	1200.3	1184.4	1189.2	1183.2
17.5°	1181.9	1174.7	1158.8	1164.8	1158.8
20°	1153.8	1146.5	1129.5	1133.1	1128.4
22.5°	1125.8	1114.8	1098.9	1098.9	1096.5
25°	1092.8	1083.1	1062.4	1064.8	1062.4
27.5°	1056.2	1047.7	1032.0	1028.3	1022.3
30°	1019.7	1009.9	991.7	988.0	983.1
32.5°	980.7	973.4	953.9	946.5	941.6
35°	942.9	930.7	911.2	903.8	897.7
37.5°	900.2	889.2	869.6	861.1	855.0
40°	856.3	846.5	826.9	816.1	811.2
42.5°	813.6	803.8	784.4	772.0	764.8
45°	767.2	758.8	740.3	727.1	722.1
47.5°	722.1	713.5	694.1	680.6	673.4
50°	674.5	668.4	651.3	634.2	628.1
52.5°	628.1	619.6	603.8	590.4	581.8
55°	580.7	573.3	558.7	544.0	538.0
57.5°	533.0	527.0	511.0	496.4	491.5
60°	485.4	480.6	463.6	450.1	446.5
62.5°	439.1	430.6	418.4	406.2	401.3
65°	391.6	384.2	372.0	361.0	355.0
67.5°	342.8	336.6	325.8	317.2	312.3
70°	297.6	292.7	281.7	273.2	268.4
72.5°	251.3	246.4	240.3	231.8	228.1
75°	204.9	202.5	196.3	189.1	191.5
77.5°	163.4	158.5	156.1	152.4	148.8
80°	122.0	120.7	118.3	114.7	112.2
82.5°	83.0	83.0	81.8	76.9	76.9
85°	50.0	48.8	47.6	43.8	42.7
87.5°	22.0	19.6	17.1	13.4	12.1
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	15.09	16.70	15.45	17.01	17.33	14.64	16.25	15.01	16.57	16.88
	3H	16.84	18.29	17.21	18.62	18.98	16.35	17.80	16.72	18.13	18.49
	4H	17.48	18.85	17.88	19.20	19.58	16.99	18.36	17.39	18.70	19.08
	6H	17.95	19.22	18.36	19.58	19.98	17.45	18.72	17.86	19.08	19.47
	8H	18.09	19.31	18.52	19.69	20.09	17.59	18.80	18.02	19.19	19.59
	12H	18.19	19.35	18.61	19.73	20.16	17.67	18.83	18.10	19.21	19.64
4H	2H	15.65	17.02	16.05	17.36	17.74	15.29	16.66	15.69	17.01	17.39
	3H	17.62	18.77	18.03	19.17	19.57	17.22	18.36	17.62	18.76	19.16
	4H	18.40	19.43	18.83	19.85	20.28	17.97	19.01	18.41	19.42	19.86
	6H	18.99	19.90	19.45	20.34	20.80	18.56	19.47	19.02	19.91	20.36
	8H	19.18	20.03	19.64	20.47	20.94	18.75	19.59	19.21	20.04	20.50
	12H	19.32	20.08	19.80	20.55	21.02	18.86	19.62	19.34	20.10	20.57
8H	4H	18.67	19.52	19.13	19.96	20.43	18.30	19.14	18.76	19.59	20.05
	6H	19.39	20.09	19.88	20.58	21.05	19.00	19.71	19.50	20.20	20.67
	8H	19.65	20.28	20.16	20.78	21.27	19.25	19.88	19.76	20.39	20.88
	12H	19.85	20.40	20.35	20.89	21.45	19.43	19.99	19.94	20.48	21.04
12H	4H	18.70	19.46	19.18	19.93	20.40	18.33	19.09	18.81	19.57	20.04
	6H	19.43	20.06	19.94	20.57	21.06	19.06	19.69	19.57	20.20	20.69
	8H	19.75	20.30	20.25	20.79	21.35	19.37	19.93	19.87	20.42	20.98